

# **NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH**

Editor-in-Chief: Kai Siegbahn

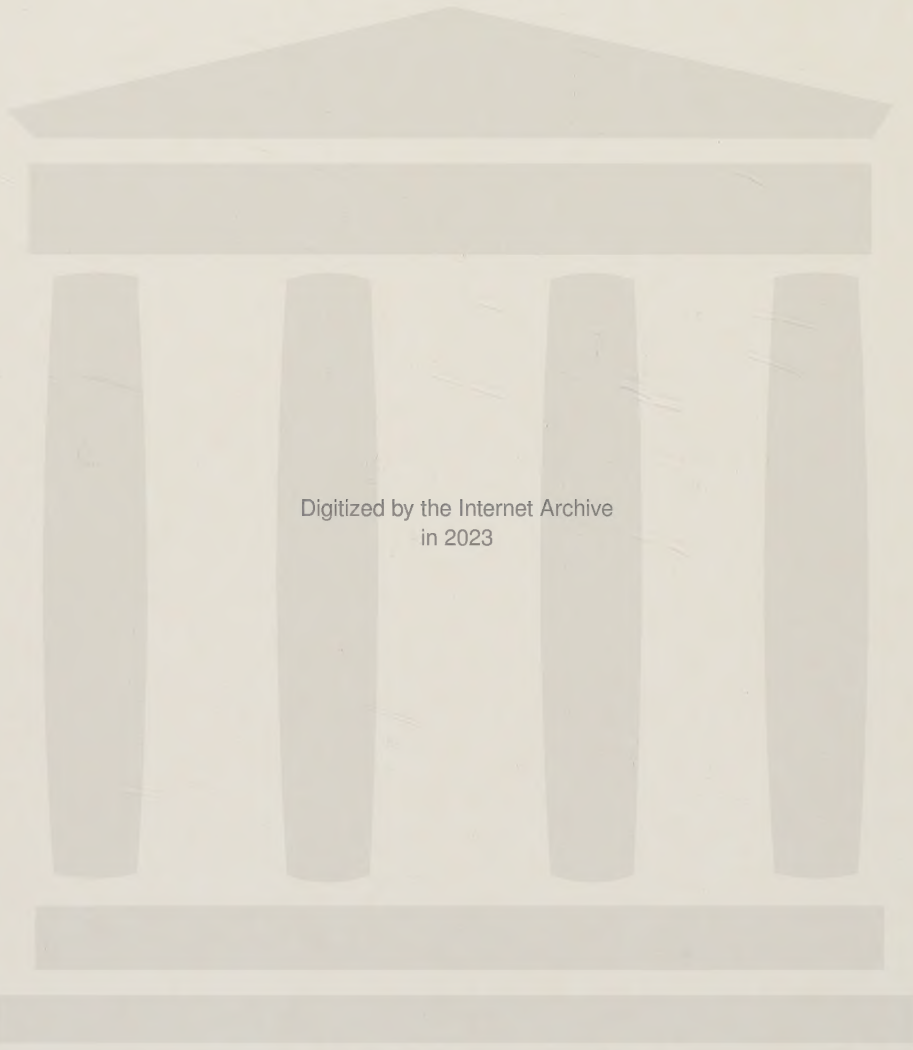
Section A: accelerators, spectrometers, detectors  
and associated equipment

Editors: Kai Siegbahn & Erik Karlsson

**MASTER INDEX**

**VOLUMES 211-220**

THIS INDEX COMPLETES VOLUME 220



Digitized by the Internet Archive  
in 2023

# **NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH**

Editor-in-Chief: Kai Siegbahn

Section A: accelerators, spectrometers, detectors  
and associated equipment

Editors: Kai Siegbahn & Erik Karlsson

**MASTER INDEX**

**VOLUMES 211–220**





# AUTHOR INDEX TO VOLUMES 211-220

Aarnio, P.A., J.T. Routti, J.V. Sandberg and M.J. Winberg, Adapting gamma-spectrum analysis program SAMPO for microcomputers	219 (1984) 173
Abdali, S.M., see Johansen	218 (1983) 737
Abdushukurov, D.A., Yu.S. Anisimov, G.A. Cheremukhina, S.P. Chernenko, A.B. Ivanov, L. Mouchka, S.A. Movchan, T. Netushil, V.D. Peshekhonov and Yu.V. Zanevsky, Automatic coordinate detectors based on MWPC for applied studies	217 (1983) 101
Abe, F., K. Hara, K. Kondo, S. Miyashita, H. Miyata, I. Nakano, K. Takikawa, R. Tanaka, Y. Yamamoto, T. Yasuda, K. Yasuoka, Y. Fukui, S. Kurokawa and A. Maki, Design and operation of the A beam at KEK	220 (1984) 293
Abe, S., see Minehara	212 (1983) 533
Abegg, R., see Bracco	219 (1984) 329
Abt, I., H. Daumann, P. Stähelin, P. Gorbunov, L. Luminari, M. Metcalf, R.S. Orr and J. Panman, Pattern recognition for hadronic showers in the CHARM calorimeter	217 (1983) 377
Achterberg, E., see Perez Ferreira	220 (1984) 37
Adam, J., C. Baird, D. Cockerill, P.K. Frandsen, H.J. Hilke, H. Hofmann, T. Ludlam, E. Rosso, D. Soria and D. Vaughan, A study of ageing effects in wire chambers	217 (1983) 291
Adams, M., A. Bastin, G. Coutrakon, H. Glass, D. Jaffe, J. Kirz, R. McCarthy, J.R. Hubbard, Ph. Mangeot, J. Mullie, A. Peisert, J. Tichit, R. Bouclier, G. Charpak, J.C. Santiard, F. Sauli, J. Crittenden, Y. Hsiung, D. Kaplan, C. Brown, S. Childress, D. Finley, A. Ito, A. Jonckheere, H. Jöstlein, L. Lederman, R. Orava, S. Smith, K. Sugano, K. Ueno, A. Maki, Y. Hemmi, K. Miyake, T. Nakamura, N. Sasao, Y. Sakai, R. Gray, R. Plaag, J. Rothberg, J. Rutherford and K. Young $\pi/K/p$ identification with a large-aperture ring-imaging Cherenkov counter	217 (1983) 237
Adawi, M.A., see Morsi	217 (1983) 495
Adiels, L., see Blüm	213 (1983) 251
Adishchev, Yu.N., see Golovkov	212 (1983) 167
Agamalyan, M.M., G.A. Panev and A.A. Zavedia, A multichannel detector system for small-angle neutron scattering investigations	213 (1983) 489
Aharonian, G., R. Meller and R.H. Siemann, Transverse wakefield calculations	212 (1983) 23
Ahlert, J., see Schemmerling	216 (1983) 165
Ahmad, M., see Madey	214 (1983) 401
Ahmad, M., see Khan	215 (1983) 193
Ahmad, S., J.C. Bizot, B. Delcourt, J. Jeanjean, M. Jeanjean, H. Nguyen-Ngoc and W.R. Wodrich, Large radius self-supporting cylindrical multiwire proportional chambers to be used at the ASTERIX experiment at LEAR	217 (1983) 169
Ahsan, M.H., N. Dytlewski, S.A. Siddiqui and H.H. Thies, Removal of interference effect in the calculation of photonuclear cross-sections	212 (1983) 333
Aihara, H., M. Alston-Garnjost, D.H. Badtke, J.A. Bakken, A. Barbaro-Galtieri, A.V. Barnes, B.A. Barnett, B. Blumenfeld, A. Bross, C.D. Buchanan, W.C. Carithers, O. Chamberlain, J. Chiba, C.-Y. Chien, A.R. Clark, O.I. Dahl, C.T. Day, P. Delpierre, K.A. Derby, P.H. Eberhard, D.L. Fancher, H. Fujii, T. Fujii, B. Gabioud, J.W. Gary, W. Gorn, N.J. Hadley, J.M. Hauptman, B. Heck, H.J. Hilke, W. Hofmann, J.E. Huth, J. Hylen, H. Iwasaki, T. Kamae, R.W. Kenney, L.T. Kerth, R. Koda, R.R. Kofler, K.K. Kwong, J.G. Layter, C.S. Lindsey, S.C. Loken, G.W. London, X.-Q. Lu, G.R. Lynch, L. Madansky, R.J. Madaras, R. Majka, J. Mallet, P.S. Martin, K. Maruyama, J.N. Marx, J.A.J. Matthews, S.O. Melnikoff, W. Moses, P. Nemethy, D.R. Nygren, P.J. Oddone, D. Park, A. Pevsner, M. Pripstein, P.R. Robrish, M.T. Ronan, R.R. Ross, F.R. Rouse, G. Shapiro, M.D. Shapiro, B.C. Shen, W.E. Slater, M.L. Stevenson, D.H. Stork, H.K. Ticho, N. Toge, M. Urban, G.J. Van Dalen, R. Van Tyen, H. Videau, M. Wayne, W.A. Wenzel, R.F. Van Daalen Wetters, M. Yamauchi, M.E. Zeller and W.-M. Zhang, Performance of the hexagonal calorimeter at PEP-4	217 (1983) 259
Aitken, T.W., T. Joy and H.G. Price, Initial operating experience with beams at the Daresbury tandem	220 (1984) 149
Aker, E., see Oed	219 (1984) 569
Akerlof, C.W., Efficient algorithms for estimating the width of nearly normal distributions	211 (1983) 439
Alam, M.S., see Ehrlich	211 (1983) 17
Alam, M.S., see Andrews	211 (1983) 47
Albanese, J.P., O.C. Allkofer, M. Arneodo, J.J. Aubert, K.H. Becks, C. Bee, C. Benchouk, B. Bernaudin, Y. Bertsch, F. Bianchi, J. Bibby, I. Bird, D. Blum, E. Böhm, D. Botterill, X. De Bouard, F.W. Brasse, H. Braun,	



- C. Broll, S. Brown, H. Brück, C. Callebaut, J. Carr, R. Clifft, J.H. Cobb, G. Coignet, F. Combley, M. Cornelissen, F. Costa, J. Couhlan, G.R. Court, G. D'Agostini, W.D. Dau, J.K. Davies, A. Davis, F. Dengler, I. Derado, R.W. Dobinson, U. Dosselli, J. Drees, J.J. Dumond, V. Eckardt, A. Edwards, M. Edwards, G. Falley, J. Favier, M.I. Ferrero, J. Figiel, W. Flauger, E. Gabathuler, R. Gamet, J. Gayler, H.J. Gebauer, C. Gössling, J. Haas, F.J. Hasert, P. Hayman, P. Heusse, M. Jaffré, F. Janata, G. Jancso, A.S. Johnson, E.M. Kabuss, T. Kahl, G. Kellner, J. Koll, V. Korbel, J. Krüger, U. Landgraf, D. Lanske, M. Lebeau, J. Loken, M. Maire, A. Manz, M. Mermet-Guyennet, H. Minssieux, W. Mohr, F. Montanet, H.E. Montgomery, K. Moser, R.P. Mount, M. Moynet, H. Müller, E. Nagy, J. Nassalski, J.M. Noppe, P.R. Norton, A.M. Osborne, C. Pascaud, L. Paul, P. Payre, C. Peroni, G. Perrot, H. Pessard, J. Pettingale, M. Pötsch, H. Preissner, P. Renton, P. Ribarics, K. Rith, F. Röhner, E. Rondio, M.D. Rousseau, A. Schlagböhmer, N. Schmitz, A. Scaramelli, M. Schneegans, K. Schultze, M. Scory, J. Shiers, G. Singer, T. Sloan, R. Smith, M. Sproston, H.E. Stier, W. Stockhausen, M. Studt, J.M. Thénard, K. Thiele, J.C. Thompson, A. De la Torre, H. Wahlen, W. Wallucks, E. Watson, M. Whalley, D.A. Williams, W.S.C. Williams, S. Wimpenny, R. Windmolders, G. Winklmueller, G. Wolf and P. Zank, The vertex and large angle detectors of a spectrometer system for high energy muon physics . . . . . 212 (1983) 111
- Albanese, J.P., see D'Agostini . . . . . 219 (1984) 495
- Albrow, M.G., N.J. Beadle, A.A. Carter, J.R. Carter, P.C. Cecil, S.-U. Chung, D.J.A. Cockerill, W.M. Evans, M.D. Gibson, M.J. Goodrick, J. Hiddleston, N.A. McCubbin, T.W. Pritchard and D.P. Weygand, The design and calibration of precision drift chambers for use in a gluonium search experiment at the CERN ISR . . . . . 214 (1983) 201
- Alegria Feio, M. and A.J.P.L. Policarpo, Secondary light emission by noble gases . . . . . 217 (1983) 473
- Alexander, I., see Earwaker . . . . . 218 (1983) 481
- Alexander, T.K., see Häusser . . . . . 213 (1983) 301
- Alimoussa, L., see Thomas . . . . . 218 (1983) 579
- Alkire, R.W., see Levi . . . . . 213 (1983) 31
- Allkofer, O.C., see Albanese . . . . . 212 (1983) 111
- Allocca, L., M. Iannuzzi and A. La Monaca, An X-ray diffractometer for synchrotron radiation . . . . . 219 (1984) 227
- Alston-Garnjost, M., see Aihara . . . . . 217 (1983) 259
- Althoff, K.H., see Meyer . . . . . 215 (1983) 65
- Alton, G.D. and J.A. Benjamin, An improved method for producing negative ion beams from the group IIA elements for tandem Van de Graaff applications . . . . . 211 (1983) 1
- Alton, G.D., see Jones . . . . . 220 (1984) 1
- Alves, M.A.F., see Ribeirete . . . . . 214 (1983) 561
- Amaldi, U., see Jonker . . . . . 215 (1983) 361
- Amano, J. and T. Ekstedt, Channeling analysis of thermally nitrified silicon . . . . . 218 (1983) 589
- Ambs, P., see Cleland . . . . . 216 (1983) 405
- Amendolia, S.R., G. Batignani, M. Dris, F. Fidecaro, F. Liello, J. May, T. Meyer, E. Milotti, F. Ragusa, J. Richstein and L. Rolandi,  $E \times B$  and angular effects in the avalanche localization along the wire with cathode pad read-out . . . . . 217 (1983) 317
- Ames, L., see Dabrowski . . . . . 213 (1983) 89
- Amsel, G. and E. Girard, A simple automatic deadtime loss correction system for particle counting processes induced by ion beams with fluctuating intensities . . . . . 218 (1983) 16
- Amsel, G., see Maurel . . . . . 218 (1983) 159
- Amsel, G. and J.A. Davies, Precision standard reference targets for microanalysis by nuclear reactions . . . . . 218 (1983) 177
- Amsel, G. and B. Maurel, High resolution techniques for nuclear reaction narrow resonance width measurements and for shallow depth profiling . . . . . 218 (1983) 183
- Anders, H., P. Bähler, D.A. Jacobs, K.E. Johansson, B.J. Pijlgroms and R. Zurbuchen, Implementation and performance of the optical fiducial volume trigger used with the rapid cycling bubble chamber . . . . . 215 (1983) 377
- Anders, H., J. Antonsen, R.E.S. Berglund, G. Chanel, C. Ljuslin, J. Oropesa, L. Sohet and R. Zurbuchen, The hardware design of the optical fiducial volume trigger for the rapid cycling bubble chamber of EHS . . . . . 219 (1984) 66
- Andersen, H.H. and H.J. Whitlow, Wear traces and patination on Danish flint artefacts . . . . . 218 (1983) 468
- Anderson, B.D., see Madey . . . . . 214 (1983) 401
- Anderson, B.D., see Watson . . . . . 215 (1983) 413
- Anderson, D.F., R. Bouclier, G. Charpak and S. Majewski, Coupling of a BaF<sub>2</sub> scintillator to a TMAE photocathode and a low-pressure wire chamber . . . . . 217 (1983) 217
- Anderson, K., see Bayly . . . . . 218 (1983) 375
- Anderson, S., see Nelson . . . . . 215 (1983) 385
- Andeweg, A.H., see Sellschop . . . . . 218 (1983) 23
- Andreadis, T.D., see Simons . . . . . 218 (1983) 585
- Andreadis, T.D., M.L. Roush, F. Davarya, G.P. Chambers, O.F. Goktepe and J. Fine, Shape of the target region affected by the cascade recoils . . . . . 218 (1983) 747



- Andreo, P., DOSIS: a computer program for the calculation of absorbed dose in photon and electron beams from ionization measurements in a phantom ..... 211 (1983) 481
- Andrews, D., P. Avery, K. Berkelman, R. Cabenda, D.G. Cassel, J.W. DeWire, R. Ehrlich, T. Ferguson, B.G. Gibbard, M.G.D. Gilchriese, B. Gittelman, D.L. Hartill, D. Herrup, M. Herzlinger, J. Kandaswamy, D.L. Kreinick, D. Larson, N.B. Mistry, F. Morrow, E. Nordberg, R. Perchonok, R. Plunkett, K.A. Shinsky, R.H. Siemann, A. Silverman, P.C. Stein, S. Stone, R. Talman, D. Weber, R. Wilcke, C. Berek, J. Haggerty, M. Hempstead, J.M. Izen, R. Kline, W.A. Loomis, W.W. MacKay, F.M. Pipkin, J. Rohlf, W. Tanenbaum, R. Wilson, A.J. Sadoff, D.L. Bridges, K. Chadwick, J. Chauveau, P. Ganci, T. Gentile, H. Kagan, R. Kass, F. Lobkowicz, A.C. Melissinos, S.L. Olsen, R. Poling, C. Rosenfeld, G. Rucinski, E.H. Thorndike, G. Warren, D. Bechis, G.K. Chang, J. Green, R. Imlay, M. Lieberman, J.J. Mueller, D. Potter, F. Sannes, P. Skubic, A. Snyder, R. Stone, A. Brody, A. Chen, M. Goldberg, N. Horwitz, M. Jibaly, H. Kooy, P. Larricia, P. Lipari, G.C. Moneti, H. Van Hecke, M.S. Alam, S.E. Csorna, R. Hicks, P.S. Panvini and J.S. Poucher, The CLEO detector ..... 211 (1983) 47
- Anghinolfi, M., see Taiuti ..... 211 (1983) 135
- Anghinolfi, M., see Capitani ..... 216 (1983) 307
- Anisimov, Yu.S., see Abdushukurov ..... 217 (1983) 101
- Annand, J.R.M. and R.B. Galloway, Light attenuation effects in small NE213 scintillation counters ..... 211 (1983) 421
- Annand, J.R.M. and R.B. Galloway, Finite sample size corrections to fast neutron analysing power and differential cross section data taken using large scattering samples ..... 211 (1983) 453
- Annegarn, H.J., see Sellschop ..... 218 (1983) 23
- Annegarn, H.J., C.S. Erasmus, J.P.F. Sellschop and M. Tredoux, Sensitivity amplification by sample preconcentration in ion beam analysis ..... 218 (1983) 33
- Annegarn, H.J., see Madiba ..... 218 (1983) 409
- Antanasijević, R., see Todorović ..... 212 (1983) 217
- Anthony, J.M. and J. Thomas, Accelerator based mass spectrometry of semiconductor materials ..... 218 (1983) 463
- Anthony, J.M., Heavy ion energy straggling ..... 218 (1983) 803
- Antille, J., A. Bernasconi, J.-C. Berney, C. Joseph, J.-F. Loude, D. Steiner and M.T. Tran, Cathode charge sampling readout system for MWPC ..... 217 (1983) 327
- Antonsen, J., see Anders ..... 219 (1984) 66
- Antson, O., see Hiismäki ..... 219 (1984) 356
- Anttila, A., see Lappalainen ..... 212 (1983) 441
- Anttila, A., see Keinonen ..... 216 (1983) 249
- Anttila, A., see Paltemaa ..... 218 (1983) 785
- Anvarian, S.T.P. and A.J. Cox, The elastic scattering of 14 MeV neutrons in large samples of iron ..... 217 (1983) 483
- Anwar, M., see Khan ..... 215 (1983) 193
- Aono, M., R. Souda, C. Oshima and U. Ishizawa, Low-energy ion scattering from the Si(111) surface: analysis of the clean  $7 \times 7$  and Te-stabilized " $1 \times 1$ " structures ..... 218 (1983) 241
- Aoyama, T., T. Mori and T. Watanabe, Pulse triggering mechanism of air proportional counters ..... 212 (1983) 281
- Apfel, R.E. and S.C. Roy, Investigations on the applicability of superheated drop detectors in neutron dosimetry ..... 219 (1984) 582
- Appleton, B.R., see Madiba ..... 218 (1983) 409
- Aprile-Giboni, E., R. Hausamman, E. Heer, R. Hess, C. Lechanoine-Le Luc, W. Leo, S. Morenzoni, Y. Onel and D. Rapin, Proton-carbon effective analyzing power between 95 and 570 MeV ..... 215 (1983) 147
- Arai, E., see Ogawa ..... 215 (1983) 167
- Arai, R., J. Bensinger, H. Boerner, Y. Fukushima, K. Hayashi, N. Ishihara, S. Inaba, T. Kohriki, S. Nakamura, K. Ogawa, F. Takasaki, Y. Unno and Y. Watase, Particle identification in the relativistic rise region using a longitudinal drift chamber ..... 214 (1983) 209
- Arai, R., H. Boerner, N. Ishihara, T. Kohriki, T. Kondo, S. Nakamura, Y. Watase and F. Suekane, Development of a large cylindrical drift chamber for the VENUS detector at TRISTAN ..... 217 (1983) 181
- Arciszewski, H.F.R. and J. Knoester, A new method for the correction of  $\gamma$ - $\gamma$  correlation matrices ..... 215 (1983) 225
- Areti, H., R. Baltrusaitis, E. Barsotti, S. Conetti, B. Cox, J. Enagonio, M. Haldeman, R. Hance, W. Haynes, S. Katsanevas, C. Kerns, P. Kostarakis, P. Lebrun, H. Smith, T. Soszynski, J. Stoffel, K. Treptow, F. Turkot and R. Wagner, A fast processor for dilepton triggers ..... 212 (1983) 135
- Areti, H., see Cox ..... 219 (1984) 487
- Areti, H., see Cox ..... 219 (1984) 491
- Armbruster, P., see Geissel ..... 215 (1983) 329
- Armour, D.G., see Bailey ..... 213 (1983) 517
- Arneodo, M., see Albanese ..... 212 (1983) 111
- Aronson, S., see Engelmann ..... 216 (1983) 45
- Asahi, K., M. Ishihara, H. Kamitsubo, N. Takahashi, Y. Nojiri, T. Minamisono, A. Mizobuchi and K. Sugimoto, Measurement of ejectile polarization in heavy ion reactions via beta-ray asymmetry ..... 220 (1984) 389



- Asano, K., see Minemura ..... 219 (1984) 472
- Asaoka, S., G. Isoyama, H. Mikuni, Y. Miyahara and H. Nishimura, Slow fluctuation of synchrotron radiation and bunch lengthening in SOR ..... 215 (1983) 493
- Asher, J. and M.T. Swinhoe, An activation method to determine the isotopic ratio of  $^6\text{Li}/^7\text{Li}$  in lithium compounds ..... 213 (1983) 503
- Aspiazu, J., see Jonker ..... 215 (1983) 361
- Assmann, W., see Korschinek ..... 220 (1984) 82
- Assmann, W., G. Korschinek and H. Münzer, Test of NEC tubes in compressed geometry ..... 220 (1984) 86
- Astabatyan, R.A. and K.Zh. Margaryan, Calculations for transition radiation detectors ..... 219 (1984) 78
- Asthenopoulos, A., see Vourvopoulos ..... 220 (1984) 23
- Atac, M., see Hayashide ..... 216 (1983) 127
- Atwater, H.F., Enhanced intensity of 7.6 MeV gamma rays from an  $^{241}\text{Am}/\text{Be}$  source in a multilayered  $\text{CH}_2\text{-Fe}$  shield ..... 212 (1983) 555
- Atwater, H.F., see Robba ..... 215 (1983) 473
- Aubert, J.J., see Albanese ..... 212 (1983) 111
- Aubert, J.J., see D'Agostini ..... 219 (1984) 495
- Auchampaugh, G.F., see Wender ..... 220 (1984) 371
- Augueres, J.L., see Comby ..... 217 (1983) 345
- Aumayr, F., P. Bauer and D. Semrad, Accuracy of stopping cross section determination from RBS-spectra by Wartens' method ..... 212 (1983) 529
- Aumayr, F., see Semrad ..... 218 (1983) 811
- Auriemma, G., see Massaro ..... 219 (1984) 134
- Aurouet, C., H. Blumenfeld, M. Bourdinaud, C. Jeanney, C. Lafond and C. Perrin, Recent developments in wavelength shifters ..... 211 (1983) 309
- Austin, S.M., see Devito ..... 215 (1983) 423
- Avaldi, L., see Mitchell ..... 218 (1983) 91
- Avdeichikov, V.V., see Filatova ..... 211 (1983) 353
- Avery, P., see Andrews ..... 211 (1983) 47
- Avignone III, F.T., see Noma ..... 211 (1983) 391
- Avilés, L.A., see Haight ..... 212 (1983) 245
- Awaya, T., Two-dimensional curve fitting in counting experiments ..... 212 (1983) 311
- Ayre, C.A., P.N. Bhat, Y.Q. Ma, R.M. Myers and M.G. Thompson, Line features in the background  $\gamma$ -ray spectrum in the range 0.05-10 MeV at balloon altitudes ..... 220 (1984) 549
- Äystö, J., see Trzaska ..... 212 (1983) 221
- Azaiez, H., R. Birsá, F. Bradamante, S. Dalla Torre-Colautti, M. Di Drusco, M. Giorgi, K.-I. Kuroda, L. Lanceri, A. Martin, A. Michalowicz, P. Moras, A. Penzo, D. Perret-Gallix, P. Schiavon and A. Villari, Detection of small angle elastic scattering events at high energy based on a multiscintillator target ..... 211 (1983) 335
- Azaiez, H., see Ditta ..... 220 (1984) 343
- Azuélos, G., see Hargrove ..... 219 (1984) 461
- Backe, H., see Dahlinger ..... 219 (1984) 513
- Backenstoss, G., see Blüm ..... 213 (1983) 251
- Badtke, D.H., see Aihara ..... 217 (1983) 259
- Baerwolf, R.R., see Williams ..... 220 (1984) 585
- Bagge, L., see Lindblad ..... 215 (1983) 183
- Baglin, J.E.E., G.J. Clark and J.F. Ziegler, Catalyst metal-support interactions: Rutherford backscattering spectrometry applied to discontinuous films ..... 218 (1983) 445
- Bahal, B.M. and H.-U. Fanger, Neutron spectrum calculations for a fast-neutron generator having an annular ion source ..... 211 (1983) 469
- Bahal, B.M. and H.-U. Fanger, Comparison of the results of neutron flux and energy measurements with the predictions of theoretical calculations for a coaxial 14 MeV neutron tube ..... 220 (1984) 517
- Bahir, G., see Kalish ..... 218 (1983) 415
- Bähler, P., see Anders ..... 215 (1983) 377
- Bahnsen, K.U., see Chalupka ..... 217 (1983) 113
- Bahrdf, J. and N. Schwentner, Ray tracing of a high flux beamline ..... 216 (1983) 237
- Bailey, P., D.G. Armour, J.B.A. England, N.R.S. Tait and D.W.L. Tolfree, Hydrogen in carbon foils made by dc glow discharge in ethylene ..... 213 (1983) 517
- Bailey, R., C.J.S. Damerell, R.L. English, A.R. Gillman, A.L. Lintern, S.J. Watts and F.J. Wickens, First measurement of efficiency and precision of CCD detectors for high energy physics ..... 213 (1983) 201
- Baird, C., see Adam ..... 217 (1983) 291
- Bairrio Nuevo Jr., A., see Koide ..... 215 (1983) 177



- Baker, J.E., see Reed . . . . . 218 (1983) 324
- Baker, R., see Paciasas . . . . . 215 (1983) 261
- Baker, S.I., see Wang . . . . . 218 (1983) 669
- Bakken, J.A., see Aihara . . . . . 217 (1983) 259
- Balabanski, D., see Vapirev . . . . . 219 (1984) 376
- Balcazar-Garcia, M., see Flores . . . . . 212 (1983) 375
- Baldo, P., see Marcuso . . . . . 211 (1983) 227
- Baldwin, A.R., see Madey . . . . . 214 (1983) 401
- Baldwin, A.R., see Watson . . . . . 215 (1983) 413
- Ball, J.B., see Jones . . . . . 220 (1984) 1
- Ballon, J., V. Comparat and J. Poux, The blade chamber: a solution for curved gaseous detectors . . . . . 217 (1983) 213
- Baltay, C., see Harigel . . . . . 211 (1983) 343
- Baltrusaitis, R., see Areti . . . . . 212 (1983) 135
- Baltz, A.J., see Chasman . . . . . 219 (1984) 279
- Baquet, C., see More . . . . . 214 (1983) 531
- Barabash, L.S., V.V. Chalyshev, I.E. Chirikov-Zorin, A.G. Fedunov, A.M. Kharin, L.V. Komogorova, E.I. Maltsev, N.M. Lustov and Yu.P. Petukhov, Measurement of the coordinates of particle tracks by the centre of gravity of a light flash in a scintillator . . . . . 211 (1983) 331
- Barbareschi, L., see Ubertini . . . . . 217 (1983) 97
- Barbaro-Galtieri, A., W. Carithers, C. Day, K.J. Johnson, W.A. Wenzel and H. Videau, Tests of gas sampling electromagnetic shower calorimeter . . . . . 213 (1983) 223
- Barbaro-Galtieri, A., see Aihara . . . . . 217 (1983) 259
- Bardy, J., see Engelmann . . . . . 218 (1983) 209
- Bardy, J., see Dei-Cas . . . . . 220 (1984) 165
- Barnes, A.V., see Aihara . . . . . 217 (1983) 259
- Barnett, B.A., see Aihara . . . . . 217 (1983) 259
- Barnett, B.M., see Sobie . . . . . 219 (1984) 501
- Barnett, C.F., Status of the U.S. effort in atomic physics research relevant to the magnetically confined fusion program . . . . . 214 (1983) 1
- Baroni, G., S. Di Liberto, P. Ginobbi, F. Meddi, S. Petrera, G. Romano and C. Sgarbi, An interactive system for emulsion data acquisition . . . . . 214 (1983) 381
- Barsotti, E., see Areti . . . . . 212 (1983) 135
- Bart Czirr, J., see Jensen . . . . . 220 (1984) 406
- Bartl, W., see Chalupka . . . . . 217 (1983) 113
- Barton, J.B., see Iwanczyk . . . . . 213 (1983) 123
- Barton, M.Q., Coalescence of bunches in a synchrotron to change the acceleration harmonic number . . . . . 219 (1984) 25
- Basse-Cathalinat, B., see More . . . . . 214 (1983) 531
- Bastin, A., see Adams . . . . . 217 (1983) 237
- Basu, C., see Kukreja . . . . . 219 (1984) 196
- Bateman, J.E., J.F. Connolly, R. Stephenson, G.J.R. Tappern and A.C. Flesher, The development of MWPC-based systems for imaging X-rays, gamma rays and charged particles in applications in medicine, materials science and biochemistry . . . . . 217 (1983) 77
- Bates, J.C., A fluid walled neutron bottle (*Letter to the Editor*) . . . . . 216 (1983) 535
- Bates, J.C., Suppression of "spill-over" by roughened neutron mirrors (*Letter to the Editor*) . . . . . 219 (1984) 445
- Batignani, G., see Amendolia . . . . . 217 (1983) 317
- Battistoni, G., P. Campana, V. Chiarella, A. Ciochio, U. Denni, E. Iarocci, G. Mannocchi, M. Meschini, G. Nicoletti and P. Picchi, Electrodeless plastic streamer tubes . . . . . 217 (1983) 429
- Battistoni, G., P. Campana, V. Chiarella, U. Denni, B. D'Ettorre-Piazzoli, E. Iarocci, G. Mannocchi, G. Nicoletti and P. Picchi, Influence of gas mixture and cathode material on limited streamer operation . . . . . 217 (1983) 433
- Battistoni, G., E. Bellotti, G. Bologna, P. Campana, C. Castagnoli, V. Chiarella, D.C. Cundy, B. D'Ettorre Piazzoli, E. Fiorini, E. Iarocci, G. Mannocchi, G.P. Murtas, P. Negri, G. Nicoletti, L. Periale, P. Picchi, M. Price, A. Pullia, S. Ragazzi, M. Rollier, O. Saavedra, L. Trasatti and L. Zanotti, An experimental study of the neutrino background in underground experiments on nucleon decay . . . . . 219 (1984) 300
- Baubilier, M., M. Boratav, J.-F. Genat, B. Grossetete, C. Pambrun and P. Villeneuve de Janti, The performance of limited streamer drift tubes . . . . . 217 (1983) 205
- Bauer, G., see Trautmann . . . . . 214 (1983) 21
- Bauer, P., see Aumayr . . . . . 212 (1983) 529
- Bauer, P., see Semrad . . . . . 218 (1983) 811
- Bauer, W., A. Brandelik, A. Citron, F. Graf, L. Szecsi and D. Proch, A superconducting accelerating cavity in PETRA . . . . . 214 (1983) 189
- Baum, J.W., see Varma . . . . . 212 (1983) 493



- Baumann, H., see Rohwer . . . . . 211 (1983) 543
- Baumann, H., see Klein . . . . . 220 (1984) 200
- Baumgart, H., H. Berg, E. Huttel, E. Pfaff, G. Reiter and G. Clausnitzer,  $^4\text{He}$  stopping cross sections in  $\text{H}_2$ , He,  $\text{N}_2$ ,  $\text{O}_2$ , Ne, Ar, Kr, Xe,  $\text{CH}_4$  and  $\text{CO}_2$  . . . . . 215 (1983) 319
- Bauwens, G., M. Cypres, A. Noblet and G. Sylin, Target simulator for the study of target cooling . . . . . 216 (1983) 349
- Bavizhev, M.D., see Filatova . . . . . 211 (1983) 353
- Bavizhev, M.D., see Filatova . . . . . 215 (1983) 135
- Baxter, J.P., see Kimock . . . . . 218 (1983) 287
- Bayliss, L., see Sandoval . . . . . 216 (1983) 171
- Bayly, A.R., A.R. Waugh and K. Anderson, SIMS micro-analysis with a gallium ion microprobe . . . . . 218 (1983) 375
- Bazzano, A., L. Boccaccini, C.D. La Padula, M. Mastropietro, R. Patriarca, F. Polcaro, P. Ubertini and R.K. Manchanda, Design and performance of a one square meter proportional counter system for hard X-ray astronomy . . . . . 214 (1983) 481
- Bazzano, A., see Ubertini . . . . . 217 (1983) 97
- Beadle, N.J. see Albrow . . . . . 214 (1983) 201
- Bechis, D., see Andrews . . . . . 211 (1983) 47
- Beck, J.W., Analysis of a camera based SPECT system . . . . . 213 (1983) 415
- Beck, K., K. Kopitzki, G. Krauss and G. Mertler, A modified continuum for the evaluation of channeling experiments for foreign atom location . . . . . 218 (1983) 97
- Becker, A.J., see Chirovsky . . . . . 219 (1984) 103
- Becker, C.H. An experimental study of the surface chemistry and evaporation kinetics of liquid sodium . . . . . 218 (1983) 533
- Becker, Ch., W. Weihs and G. Zech, Effects of space charge, leakage currents and diffusion in large planar electrodeless drift chambers . . . . . 213 (1983) 243
- Becker, J., see Toki . . . . . 219 (1984) 479
- Becker, J.A., A real-time neutron beam monitor . . . . . 211 (1983) 297
- Becker, J.A., J.B. Carlson, R.G. Lanier, K.H. Maier, L.G. Mann, G.L. Struble, T.W. Nail, R.K. Sheline, W. Stöfl, L.E. Ussery, J.A. Cizewski and B. Erkill, In-beam gamma-ray studies with tritons . . . . . 211 (1983) 379
- Becker, K., see Krämer . . . . . 220 (1984) 123
- Becker, R.L., A.L. Ford and J.F. Reading, Theory of L-shell ion-impact ionization: inclusive cross sections and multiple-vacancy (K-satellite) distributions . . . . . 214 (1983) 49
- Becker, U., M. Capell, M. Chen, M. White, C.H. Ye, K. Yee, J. Fehlmann and P.G. Seiler, Special gas mixtures with very small drift angles at low drift velocities . . . . . 214 (1983) 525
- Becker, U., P. Berges, E. Scheidker, P. Seiler, C.H. Ye and C. Willmott, Resolution study for large drift chamber systems . . . . . 220 (1984) 338
- Beckmann, R., see Grabez . . . . . 211 (1983) 209
- Becks, K.H., see Albanese . . . . . 212 (1983) 111
- Bee, C., see Albanese . . . . . 212 (1983) 111
- Beech, J.C., S.V. Davis, C.W. Horrabain, W.T. Johnstone, W. Silversides and K. Spurling, Remote real time oscilloscope displays for accelerator diagnostics on the tandem Van de Graaff at the Daresbury Laboratory . . . . . 220 (1984) 170
- Beer, W., P.F.A. Goudsmit and L. Knecht, A new crystal bending device for focusing crystal spectrometers . . . . . 219 (1984) 322
- Belau, E., R. Klanner, G. Lutz, E. Neugebauer, H.J. Seebrunner, A. Wylie, T. Böhringer, L. Hubbeling, P. Weilhammer, J. Kemmer, U. Kötz and M. Riesebell, Charge collection in silicon strip detectors . . . . . 214 (1983) 253
- Belau, E., J. Kemmer, R. Klanner, U. Kötz, G. Lutz, W. Männer, E. Neugebauer, H.J. Seebrunner and A. Wylie, Silicon detectors with  $5\text{ }\mu\text{m}$  spatial resolution for high energy particles . . . . . 217 (1983) 224
- Bell, Z.W., J.W. McConnell and E.D. Carroll, A digital pulse-pair detecting circuit (*Letter to the Editor*) . . . . . 211 (1983) 551
- Bellazzini, R., see Perez-Mendez . . . . . 217 (1983) 89
- Bellazzini, R., A. Del Guerra, M.M. Massai and G. Spandre, Biomedical applications of MWPCs for digital imaging of soft  $\beta$ -emitters . . . . . 217 (1983) 93
- Bellotti, E., see Battistoni . . . . . 219 (1984) 300
- Belokurova, I.N., see Kozhukh . . . . . 213 (1983) 483
- Ben-Zvi, I. and J.M. Brennan, The quarter wave resonator as a superconducting linac element . . . . . 212 (1983) 73
- Ben-Zvi, I., Superconducting linacs used with tandems . . . . . 220 (1984) 177
- Benchouk, C., see Albanese . . . . . 212 (1983) 111
- Benchouk, C., see D'Agostini . . . . . 219 (1984) 495
- Benenson, R.E., see Wielunski . . . . . 218 (1983) 120
- Benichou, J.L., A. Hervé, K.E. Johansson, P. Lecoq, P. Olivier, J. Pothier, G. Waurick, E. Wiatrowski, R. Roosen, S.P.K. Tavernier, G. Van Beek and O.R. Williams, A study of bubble chamber operating conditions for holographic image recording . . . . . 214 (1983) 245
- Bénichou, J.L., W. Flegel, B. Friend, O. Gildemeister, C. Girard, C. Hauviller, A. Hervé, A. King, P. Lecoq, J. Panman and K. Winter, Design and study of a large cylindrical drift chamber . . . . . 217 (1983) 163
- Benjamin, J.A., see Alton . . . . . 211 (1983) 1

- Benjamin, J.A., see Jones . . . . . 220 (1984) 1
- Bennett, A., see Hargrove . . . . . 219 (1984) 461
- Benrachi, F., see Pastor . . . . . 212 (1983) 209
- Bensinger, J., see Arai . . . . . 214 (1983) 209
- Benso, S., G. Darbo, L. Rossi, M. Sannino, L. Traspedini and S. Vitale, The use of a pair of time projection chambers as a wide-angle vertex detector for the  $\Omega'$  spectrometer at CERN . . . . . 217 (1983) 194
- Bentley, A.J., L.G. Earwaker, J.P.G. Farr, J. Pountney and M. Saremi, The analysis for light elements of hard gold electrodeposits . . . . . 218 (1983) 555
- Benzaki, K., see Inada . . . . . 218 (1983) 607
- Berek, C., see Andrews . . . . . 211 (1983) 47
- Berg, D., see Chandlee . . . . . 215 (1983) 369
- Berg, D., see Nelson . . . . . 216 (1983) 381
- Berg, G.P.A., see Martin . . . . . 214 (1983) 281
- Berg, H., see Baumgart . . . . . 215 (1983) 319
- Berg, U.E.P., see Devito . . . . . 215 (1983) 423
- Bergère, R., see Veyssièrre . . . . . 212 (1983) 61
- Berges, P., see Becker . . . . . 220 (1984) 338
- Berglund, R.E.S., see Anders . . . . . 219 (1984) 66
- Bergström, I., see Blüm . . . . . 213 (1983) 251
- Berkelman, K., see Andrews . . . . . 211 (1983) 47
- Berliner, R., J. Sudol and G. Moum, A multi-microprocessor neutron spectrometer computer interface system . . . . . 213 (1983) 333
- Bernasconi, A., see Antille . . . . . 217 (1983) 327
- Bernaudin, B., see Albanese . . . . . 212 (1983) 111
- Berney, J.-C., see Antille . . . . . 217 (1983) 327
- Berst, J.D., see Lecoq . . . . . 213 (1983) 329
- Bertl, W.H., L. Felawka and R.J. Powers, Fast-bus trigger processor for  $e^+e^-e^+$  events in the SINDRUM detector . . . . . 217 (1983) 367
- Bertrand, P., J.-M. Beuken and M. Delvaux, Low energy ion scattering study of  $\text{MoO}_3\text{--BiPO}_4$  biphasic catalysts . . . . . 218 (1983) 249
- Bertrand, R., see Côté . . . . . 219 (1984) 456
- Bertsch, D.L., Application of multiple scattering theory to spark chamber type detectors . . . . . 220 (1984) 489
- Bertsch, Y., see Albanese . . . . . 212 (1983) 111
- Besenbacher, F., B.B. Nielsen and J.L. Whitton, Ion beam detection of the austenitic–martensitic phase transformation of single crystal stainless steel . . . . . 218 (1983) 551
- Bethge, K., see Rohwer . . . . . 211 (1983) 543
- Bethge, K., see Klein . . . . . 220 (1984) 200
- Beuken, J.-M., see Bertrand . . . . . 218 (1983) 249
- Beyerle, A., see Szymczyk . . . . . 213 (1983) 115
- Bezzon, G., see Della Mea . . . . . 218 (1983) 493
- Bezzon, G., see Signorini . . . . . 220 (1984) 30
- Bhat, P.N., see Ayre . . . . . 220 (1984) 549
- Bhatia, T.S., see Hollas . . . . . 219 (1984) 275
- Bhattacharjee, N., see Bose . . . . . 212 (1983) 539
- Bhattacharya, R., see Bose . . . . . 217 (1983) 521
- Bhattacharya, R.C. and P.K. Ghosh, A time averaged background compensator for Geiger–Müller counters (*Letter to the Editor*) . . . . . 213 (1983) 553
- Bhattacharya, R.S. and P.P. Pronko, Application of RBS and PIXE in specific site determination of S and Si in ion implanted GaAs . . . . . 218 (1983) 515
- Bhattacharyya, R., see Sinha . . . . . 219 (1984) 443
- Bhawalkar, D.D., see Kukreja . . . . . 219 (1984) 196
- Białkowski, J., see Lindblad . . . . . 215 (1983) 183
- Bianchi, F., see Albanese . . . . . 212 (1983) 111
- Bibby, J., see Albanese . . . . . 212 (1983) 111
- Biederman, H. and L. Holland, Metal doped fluorocarbon polymer films prepared by plasma polymerization using an rf planar magnetron target . . . . . 212 (1983) 497
- Biefeld, R.M., see Chu . . . . . 218 (1983) 81
- Biel, J., see Nelson . . . . . 216 (1983) 381
- Biersack, J.P., see Fink . . . . . 218 (1983) 171
- Biersack, J.P., see Fink . . . . . 218 (1983) 817
- Biggerstaff, J.A., see Jones . . . . . 220 (1984) 1
- Bilello, J.C., H. Chen, A.B. Hmelo, J.M. Liu, H.K. Birnbaum, P.J. Herley and R.E. Green, Jr., The synchrotron topography project (STP) at the National Synchrotron Light Source . . . . . 215 (1983) 291



- Billen, J.H., Emittance calculations and measurements for a sputter-type negative-ion source . . . . . 220 (1984) 225
- Billquist, P.J., see Yntema . . . . . 220 (1984) 107
- Bilpuch, E.G., see Westerfeldt . . . . . 219 (1984) 284
- Binder, U., W. De Boer, G. Grindhammer, R. Kothaus, H. Lierl and B. Sack, Comparison between argon/methane and argon/ethane gas mixtures in cylindrical drift chambers operating in a high transverse magnetic field . . . . . 217 (1983) 285
- Bini, M., G. Poggi and N. Taccetti, A gas cell for Doppler-shift attenuation measurements up to  $10^7$  Pa . . . . . 212 (1983) 235
- Binns, W.R., M.H. Israel and J. Klarmann, Scintillator-fiber charged-particle track-imaging detector . . . . . 216 (1983) 475
- Binon, F., S.V. Donskov, P. Duteil, M. Gouanere, V.A. Kachanov, A.V. Kulik, D. Michotte, Yu.V. Mikhailov, J.P. Peigneux, Yu.D. Prokoshkin, A.V. Singovsky and J.P. Stroot, Photomultiplier gain tuning system . . . . . 214 (1983) 269
- Bird, I., see Albanese . . . . . 212 (1983) 111
- Bird, J.R., P. Duerden, D.D. Cohen, G.B. Smith and P. Hillery, Depth profiles and microtopology . . . . . 218 (1983) 53
- Bird, J.R. and E. Clayton, The PIGME method for fluorine determination . . . . . 218 (1983) 525
- Birnbaum, H.K., see Bilello . . . . . 215 (1983) 291
- Biró, T., see Ranogajec-Komor . . . . . 212 (1983) 383
- Birsa, R., see Azaiez . . . . . 211 (1983) 335
- Bissinger, G., Additivity failure in charge transfer from molecules to bound and continuum states of  $\sim$  MeV/u  $H^+$ ,  $He^{+2+}$  projectiles . . . . . 214 (1983) 81
- Biswas, M., see Mitra . . . . . 220 (1984) 537
- Biswas, S., see Kukreja . . . . . 219 (1984) 196
- Bizard, G., see Louvel . . . . . 211 (1983) 535
- Bizot, J.C., see Ahmad . . . . . 217 (1983) 169
- Bizzarri, U., M. Martone, M. Pillon and A. Vignati, Microwave emission in the X-band, by means of an intense relativistic electron beam in a rippled magnetic field . . . . . 215 (1983) 511
- Bjerkhagen, H., F. Pouyat, P. Kasper, E.E. Miranda, R.L. Sekulin, W. Venus and L. Walton, Test of high resolution two-beam holography in a model of the Big European Bubble Chamber, BEBC . . . . . 220 (1984) 300
- Blaauboer, R.O., see Van Engelen . . . . . 219 (1984) 529
- Blackmore, E.W., see Sobie . . . . . 219 (1984) 501
- Blagus, S., Đ. Miljanić and D. Rendić, Three and four body nuclear reactions in special kinematical conditions . . . . . 216 (1983) 415
- Blanchard, F.A. and T.D. Lickly, Analysis of chemical samples for environmental levels of radioactivity using a massively shielded 18% Ge(Li) system . . . . . 219 (1984) 413
- Blatt, K., see Krämer . . . . . 220 (1984) 123
- Blauner, P.G., see O'Connor . . . . . 218 (1983) 293
- Blecher, M., see Hargrove . . . . . 219 (1984) 461
- Bleck, M.E., see Westerfeldt . . . . . 219 (1984) 284
- Bleichert, B.-M., C. Grupen and D. Mattern, Particle identification in an electron/hadron calorimeter . . . . . 212 (1983) 145
- Blocker, C., G.W. Brandenburg, R. Carey, T. Edberg, M. Levi, J. Oliver, N. Patz, E. Sadowski, T. Schaad and R.F. Schwitters, Intelligent towers for electromagnetic showers . . . . . 216 (1983) 71
- Blodgett, D.E., see Hartner . . . . . 216 (1983) 113
- Blok, H., see Distelbrink . . . . . 220 (1984) 433
- Blönnigen, F., see Faust . . . . . 213 (1983) 545
- Bloomer, M.A., H.H. Heckman and Y.J. Karant, A method for precise charge measurements of relativistic light nuclei,  $Z \leq 3$ , in nuclear track emulsion . . . . . 215 (1983) 247
- Blum, D., see Albanese . . . . . 212 (1983) 111
- Blüm, P., R. Guigas, H. Koch, M. Meyer, H. Poth, U. Raich, B. Richter, G. Backenstoss, M. Hasinoff, P. Pavlopoulos, J. Repond, L. Tauscher, D. Tröster, L. Adiels, I. Bergström, K. Fransson, A. Kerek, M. Suffert and K. Zioutas, A modular NaI(Tl) detector for 20–1000 MeV photons . . . . . 213 (1983) 251
- Blumenfeld, B., see Aihara . . . . . 217 (1983) 259
- Blumenfeld, H., see Aurouet . . . . . 211 (1983) 309
- Blunden, A., D.G. O'Prey and W.H. Tait, Real time spectrum analysis . . . . . 216 (1983) 191
- Boccaccini, L., see Bazzano . . . . . 214 (1983) 481
- Boccaccini, L., see Ubertini . . . . . 217 (1983) 97
- Bock, R.K., Software for large spectrometers . . . . . 217 (1983) 1
- Boclet, D., see Paciesas . . . . . 215 (1983) 261
- Bodart, F. and S.E. Donnelly, Lateral variation measurement of helium concentration in implanted Al foils using a proton microbeam . . . . . 218 (1983) 529
- Bode, P. and M. De Bruin, Preamplifiers with pulsed optical feedback as a source of errors in instrumental activation analysis (*Letter to the Editor*) . . . . . 216 (1983) 529
- Boerner, H., see Arai . . . . . 214 (1983) 209
- Boerner, H., see Arai . . . . . 217 (1983) 181
- Boers, A.L., see Koeleman . . . . . 218 (1983) 225



- Bogorodzki, A., W. Olejniczak and A. Rychtelski, The multiwire proportional chamber for extensive air shower experiments . . . . . 217 (1983) 149
- Bohdansky, J., see Roth . . . . . 218 (1983) 751
- Bohlen, H.G., see Lettau . . . . . 213 (1983) 187
- Böhringer, T., see Belau . . . . . 214 (1983) 253
- Böhm, E., see Albanese . . . . . 212 (1983) 111
- Boissevain, J.G., see Hollas . . . . . 219 (1984) 275
- Bojsen, J., Cadmium telluride [CdTe(Cl)] detectors and their geometrical characteristics in local disappearance measurements using radionuclides . . . . . 219 (1984) 592
- Bol, A., P. Leleux, P. Lipnik, P. Macq and A. Ninane, A novel design for a fast intense neutron beam . . . . . 214 (1983) 169
- Bologna, G., see Battistoni . . . . . 219 (1984) 300
- Bolton, R.D., R.D. Carlini, M.D. Cooper, J.S. Frank, V. Hart, H.S. Matis, R.E. Mischke, V.D. Sandberg and U. Sennhauser, A stereo, cylindrical drift chamber for muon decay experiments at LAMPF . . . . . 217 (1983) 173
- Bom, V.R., Data analysis for a semiconductor beta ray spectrometer . . . . . 220 (1984) 479
- Bonaparte, S.D., see Jacobs . . . . . 213 (1983) 387
- Bonderup, E., see Sørensen . . . . . 215 (1983) 27
- Bonin, W., see Dahlinger . . . . . 219 (1984) 513
- Bonnel, P., see Altman . . . . . 215 (1983) 453
- Bonner, B.E., see Hollas . . . . . 219 (1984) 275
- Boogaard, J.P., see Postma . . . . . 219 (1984) 292
- Borataw, M., see Baubillier . . . . . 217 (1983) 205
- Borgeaud, P., J.G. McEwen, P.G. Rancoita and A. Seidman, The effect of radiation on the energy resolution of ion-implanted silicon detectors . . . . . 211 (1983) 363
- Børgesen, P., H. Sørensen and Chen Hao-Ming, Ranges, reflection and secondary electron emission for keV hydrogen ions incident on solid N<sub>2</sub> . . . . . 212 (1983) 517
- Boring, J.W., R.E. Johnson, C.T. Reimann, J.W. Garrett, W.L. Brown and K.J. Marcantonio, Ion-induced chemistry in condensed gas solids . . . . . 218 (1983) 707
- Borisov, N.S., see Kiselev . . . . . 220 (1984) 399
- Bortels, G., see Nylandsted Larsen . . . . . 219 (1984) 339
- Bose, A. and A.K. Chatterjee, Measurement of absolute efficiency of solid state track detectors for 14 MeV neutrons . . . . . 220 (1984) 547
- Bose, J., N. Bhattacharjee, S.K. Sengupta and N. Chaudhuri, A method of studying atomic screening effects in pair production . . . . . 212 (1983) 539
- Bose, S., B.K. Sinha and R. Bhattacharya, Pulse shaping for fast coincidence with NaI(Tl) detectors (*Letter to the Editor*) . . . . . 217 (1983) 521
- Böttcher, J., A. Feigl, E. Finckh, C. Forstner, W. Jauman, G. Schall, H. Scheuring, U. Schneidereit, K. Stauber, P. Tröger and A. Weipert, Evaluation of proton-recoil-spectra including inverse filtering in the Fourier domain . . . . . 219 (1984) 369
- Botterill, D., see Albanese . . . . . 212 (1983) 111
- Böttiger, J., S.K. Nielsen, H.J. Whitlow and P. Wriedt, Low-temperature ion-beam mixing of platinum markers in iron . . . . . 218 (1983) 684
- Bouchier, R., see Mangeot . . . . . 216 (1983) 79
- Bouchier, R., see Anderson . . . . . 217 (1983) 217
- Bouchier, R., see Adams . . . . . 217 (1983) 237
- Bourdinaud, M., see Aurouet . . . . . 211 (1983) 309
- Bourgeois, F., Proposal for a fast, zero suppressing circuit for the digitization of analog pulses over long memory times . . . . . 219 (1984) 153
- Bourgeois, P., see Veyssi  re . . . . . 212 (1983) 61
- Bourquin, M. and T. Modis, Presampling with streamer tubes . . . . . 217 (1983) 201
- Bowman, J.D., R. Carlini, R. Damjanovich, R.E. Mischke, D.E. Nagle, R.L. Talaga, R.W. Harper and V. Yuan, Low noise ionization chambers for use in transmission measurements with medium and high energy beams . . . . . 216 (1983) 339
- Bracco, A., H.P. Gubler, D.K. Hasell, W.T.H. Van Oers, R. Abegg, C.A. Miller, M.B. Epstein, D.A. Krause, D.J. Margaziotis and A.W. Stetz, The efficiency of counter telescopes for intermediate energy protons . . . . . 219 (1984) 329
- Bracker, S.B., see Hartner . . . . . 216 (1983) 113
- Bradamante, F., see Azaiez . . . . . 211 (1983) 335
- Braden, C.H., see Lewis . . . . . 211 (1983) 371
- Brady, F.P., see Klages . . . . . 219 (1984) 269
- Brandelik, A., see Bauer . . . . . 214 (1983) 189
- Brandenburg, G.W., see Blocker . . . . . 216 (1983) 71
- Brandt, D., A simple classical model for the impact parameter dependence of electron capture . . . . . 214 (1983) 93
- Brandt, R., see Grabez . . . . . 211 (1983) 209

- Brasse, F.W., see Albanese . . . . . 212 (1983) 111
- Brau, J.E., see Cox . . . . . 219 (1984) 487
- Braun, H., see Albanese . . . . . 212 (1983) 111
- Breakstone, A.M., C.A. Heusch and A. Seiden, A large-solid-angle spectrometer for high-energy electrons and photons . . . . . 211 (1983) 73
- Brendle, M., A microcomputer system for measurement and control . . . . . 219 (1984) 347
- Brennan, J.M., see Ben-Zvi . . . . . 212 (1983) 73
- Brenner, K., see Nölscher . . . . . 218 (1983) 116
- Breskin, A., R. Chechik, I. Levin and N. Zwing, Heavy particle timing and imaging with low-pressure MWPCs . . . . . 217 (1983) 107
- Breskin, A., T. Johansson, S. Polikanov and J.C. Santiard, The TREC: a  $4\pi$ , low-pressure tracking range and energy chamber for heavily ionizing particles . . . . . 217 (1983) 131
- Breskin, A., see Majewski . . . . . 217 (1983) 265
- Breskin, A., G. Charpak and S. Majewski, On the low-pressure operation of multistep avalanche chambers . . . . . 220 (1984) 349
- Bressani, T., P. Macciotta, C. Muntoni and S. Serici, Further improvements in Mössbauer spectroscopy with lead loaded plastic scintillators (*Letter to the Editor*) . . . . . 211 (1983) 231
- Breton, L., see Roy . . . . . 215 (1983) 409
- Bridges, D.L., see Andrews . . . . . 211 (1983) 47
- Brisson, P., see Omaly . . . . . 213 (1983) 19
- Brisson, V., C. Gregory, J. Hanlon, L. Kalt, B. Montes, J. Morinaud, P. Petiau, D.J. Miller, W. Van Doninck and H.A. Rubin, Performance of a prototype solid neon and solid argon calorimeter . . . . . 215 (1983) 79
- Brissot, R., see Oed . . . . . 219 (1984) 569
- Broadway, J.A., see Chambless . . . . . 214 (1983) 543
- Brody, A., see Andrews . . . . . 211 (1983) 47
- Broll, C., see Albanese . . . . . 212 (1983) 111
- Bromberg, C., see Nelson . . . . . 216 (1983) 381
- Bross, A., see Aihara . . . . . 217 (1983) 259
- Brown, B., see Nelson . . . . . 216 (1983) 381
- Brown, C., see Adams . . . . . 217 (1983) 237
- Brown, C.N., see Mangeot . . . . . 216 (1983) 79
- Brown, I.G. and B. Feinberg, The LBL EBS test-stand . . . . . 220 (1984) 251
- Brown, J., see Toki . . . . . 219 (1984) 479
- Brown, K.L., see Martin . . . . . 214 (1983) 281
- Brown, M.D., see Land . . . . . 214 (1983) 35
- Brown, M.D., see Simons . . . . . 218 (1983) 585
- Brown, S., see Albanese . . . . . 212 (1983) 111
- Brown, S., see Paciesas . . . . . 215 (1983) 261
- Brown, W.L., see Boring . . . . . 218 (1983) 707
- Brück, H., see Albanese . . . . . 212 (1983) 111
- Bruening, K., see Jensen . . . . . 220 (1984) 406
- Brugger, R.M., see Miller . . . . . 216 (1983) 219
- Bruijn, M.P., J. Verhoeven and M.J. Van der Wiel, Optimization of multilayer soft X-ray mirrors (*Letter to the Editor*) . . . . . 219 (1984) 603
- Brunson, G.S., An extension to the Feynman method of detecting fission neutrons . . . . . 214 (1983) 341
- Bryman, D.A., see Hargrove . . . . . 219 (1984) 461
- Bubb, I., see Davies . . . . . 218 (1983) 141
- Bubnov, N.N., see Bunyatova . . . . . 219 (1984) 297
- Buchanan, C.D., see Aihara . . . . . 217 (1983) 259
- Buck, T.M., G.H. Wheatley and D.P. Jackson, Quantitative analysis of first and second surface layers by LEIS (TOF) . . . . . 218 (1983) 257
- Budd, K., see MacArthur . . . . . 218 (1983) 519
- Bukshpan, S., see Gayer . . . . . 220 (1984) 525
- Bulgakov, N.K., see Filatova . . . . . 211 (1983) 353
- Bulgakov, N.K., see Filatova . . . . . 215 (1983) 135
- Büngener, A., B. Koppitz, R. Van Staa, P. Stähelin and M. Holder, Electron identification beyond 1 GeV by means of transition radiation . . . . . 214 (1983) 261
- Büngener, A., B. Koppitz, R. Van Staa, P. Stähelin and M. Holder, Electron identification beyond 1 GeV by means of transition radiation . . . . . 217 (1983) 254
- Bunnell, K., see Toki . . . . . 219 (1984) 479
- Bunyatova, E.I. and N.N. Bubnov, Synthesis of chromium (V) complex on the basis of deuterated ethanediol for a polarized deuteron target . . . . . 219 (1984) 297
- Bunyatova, E.I., see Kiselev . . . . . 220 (1984) 399

- Burger, A., see Nissenbaum . . . . . 213 (1983) 27
- Burger, A., see Levi . . . . . 213 (1983) 31
- Burger, A., see Levi . . . . . 213 (1983) 35
- Burgess, D.D. and R.J. Tervo, Background estimation for gamma-ray spectrometry . . . . . 214 (1983) 431
- Burleson, G.R., see Spinka . . . . . 211 (1983) 239
- Burshtein, Z., see Levi . . . . . 213 (1983) 35
- Busse, W., J.D. Larson, R. Michaelsen, W. Pelzer, D. Renner, B. Spellmeyer and K. Ziegler, Progress of the VICKSI-tandem injector project . . . . . 220 (1984) 26
- Bussey, P.J., C.N. Paterson, C. Raine, R.E. Hughes-Jones, G.D. Lafferty, J.B. Lane and D. Mercer, A polarised high energy tagged photon beam . . . . . 211 (1983) 301
- Butler, P.A., see James . . . . . 212 (1983) 545
- Butler, R.C., see Ubertini . . . . . 217 (1983) 97
- Cabenda, R., see Andrews . . . . . 211 (1983) 47
- Cabral-Prieto, A., see Jiménez-Domínguez . . . . . 219 (1984) 256
- Cáceres, M.O. and H. Wio, Random walk approach for neutron diffusion with strong absorption (*Letter to the Editor*) . . . . . 219 (1984) 441
- Cadoret, R., see Omaly . . . . . 213 (1983) 19
- Calabretta, L. and E. Migneco, Study for a beam bunching system at LNS . . . . . 220 (1984) 158
- Callebaut, C., see Albanese . . . . . 212 (1983) 111
- Camin, D., see Perez Ferreira . . . . . 220 (1984) 37
- Campana, P., see Battistoni . . . . . 217 (1983) 429
- Campana, P., see Battistoni . . . . . 217 (1983) 433
- Campana, P., see Battistoni . . . . . 219 (1984) 300
- Campbell, A.B., see Knudson . . . . . 218 (1983) 625
- Campbell, J.L., J.A. Cookson and H. Paul, Uncertainties in thick-target PIXE analysis . . . . . 212 (1983) 427
- Campbell, J.L., see Cookson . . . . . 216 (1983) 489
- Cao Jing-Xi., see Liang Xiao-Zhong . . . . . 220 (1984) 457
- Capell, M., see Becker . . . . . 214 (1983) 525
- Capitani, G.P., E. De Sanctis, C. Guaraldo, P. Di Giacomo, V. Lucherini, E. Polli, A.R. Reolon, R. Scrimaglio, M. Anghinolfi, P. Corvisiero, G. Ricco, M. Sanzone and A. Zucchiatti, The LEALE photon beam facility at Frascati, obtained by positron annihilation on a liquid hydrogen target . . . . . 216 (1983) 307
- Čaplar, R., see Krämer . . . . . 220 (1984) 123
- Capponi, M., I. Massa, M. Piccinini and M. Poli, Monte Carlo simulated detector responses to gamma radiations coming from extended sources . . . . . 217 (1983) 465
- Carchano, H., see Thomas . . . . . 218 (1983) 579
- Carey, R., see Blocker . . . . . 216 (1983) 71
- Carithers, W., see Barbaro-Galtieri . . . . . 213 (1983) 223
- Carithers, W.C., see Aihara . . . . . 217 (1983) 259
- Carlini, R., see Bowman . . . . . 216 (1983) 399
- Carlini, R.D., see Bolton . . . . . 217 (1983) 173
- Carlos, P., see Veyssiére . . . . . 212 (1983) 61
- Carlson, J.B., see Becker . . . . . 211 (1983) 379
- Carmack, C.S., see Filatova . . . . . 211 (1983) 353
- Carne, A., see Eaton . . . . . 214 (1983) 151
- Carosi, R., A. Di Ciccio, C.W. Fabjan, H. Gordon, M. Harris, G. Kessler, J. v.d. Lans, I. Mannelli, L. Olsen, G. Pierazzini, W.J. Willis, W. Witzeling and C. Woody, A hexagonal uranium calorimeter for measuring electromagnetic showers at the CERN ISR . . . . . 219 (1984) 311
- Carpenter, J.M. and N. Watanabe, Time focussing and resolution in resonance detector neutron spectrometers . . . . . 213 (1983) 311
- Carr, J., see Albanese . . . . . 212 (1983) 111
- Carrigan Jr., R.A., see Filatova . . . . . 211 (1983) 353
- Carrigan, Jr., R.A., see Wang . . . . . 218 (1983) 669
- Carroll, E.D., see Bell . . . . . 211 (1983) 551
- Carstanjen, H.D., see Müller . . . . . 218 (1983) 75
- Carter, A.A., see Albrow . . . . . 214 (1983) 201
- Carter, A.L., see Hargrove . . . . . 219 (1984) 461
- Carter, J.R., see Albrow . . . . . 214 (1983) 201
- Carter, D.E., see Randers-Pehrson . . . . . 215 (1983) 433
- Cassel, D.G., see Andrews . . . . . 211 (1983) 47
- Cassell, R., see Toki . . . . . 219 (1984) 479
- Casson, A.L., see Madey . . . . . 214 (1983) 401



Casson, W., see Madey	214 (1983) 401
Castagnoli, C., see Battistoni	219 (1984) 300
Cawley, M.F., see Fegan	211 (1983) 179
Ceballos, A., see Perez Ferreira	220 (1984) 37
Cecil, P.C., see Albrow	214 (1983) 201
Cecil, R.A., see Madey	214 (1983) 401
Cernigoi, C., N. Grion, G. Pauli, R. Rui and R. Cherubini, A counter for the identification and the energy determination of light charged particles and neutrons of 20–100 MeV	211 (1983) 129
Cerri, C., S.P. Denisov, R.N. Krasnokutsky, S.A. Medved, V.S. Mikhailov, N.I. Naumov, S.A. Polovnikov, E.A. Rasuvaev, F. Sergiampietri, R.S. Shuvalov and D.A. Stoyanova, MARS, a fine grain aluminium–liquid argon calorimeter	214 (1983) 217
Cervellera, F., see Signorini	220 (1984) 30
Červená, J., see Mikula	211 (1983) 519
Chadwick, K., see Andrews	211 (1983) 47
Chakarvarti, S.K. and K.K. Nagpaul, Effect of electric field on cellulose nitrate track detector	214 (1983) 519
Chalupa, B., see Mikula	211 (1983) 519
Chalupka, A., W. Bartl, L. Schönauer, K.U. Bahnsen, J. Labedzki, H.J. Scheerer, H. Vonach and G. Ziegler, New MWPCs for the Munich Q3D spectrograph	217 (1983) 113
Chalyshov, V.V., see Barabash	211 (1983) 331
Chamberlain, O., see Aihara	217 (1983) 259
Chambers, G.P., see Andreadis	218 (1983) 747
Chambless, D.A. and J.A. Broadway, Comments on “Neutron spectral unfolding using the Monte Carlo method” ( <i>Letter to the Editor</i> )	214 (1983) 543
Chambon, B., see Pastor	212 (1983) 209
Chander, S., see Kumar	215 (1983) 535
Chandlee, C., D. Berg, S. Cihangir, B. Collick, T. Ferbel, S. Heppelmann, J. Huston, T. Jensen, A. Jonckheere, T. Joyce, P. Koehler, F. Lobkowicz, Y. Makdisi, M. Marshak, M. McLaughlin, C. Nelson, T. Ohshima, E. Peterson, K. Ruddick, P. Slattery and P. Thompson, Calibration and performance of a drift chamber spectrometer	215 (1983) 369
Chandlee, C., see Nelson	216 (1983) 381
Chanel, G., see Anders	219 (1984) 66
Chang, G.K., see Andrews	211 (1983) 47
Chapman, K.R., The Florida State University post accelerator – progress report	220 (1984) 194
Chapman, R., see Sanderson	219 (1984) 250
Charalambous, P., see Ubertini	217 (1983) 97
Charpak, G., see Mangeot	216 (1983) 79
Charpak, G., Gaseous detectors for particle physics: a still blooming source of new instruments	217 (1983) 5
Charpak, G., see Anderson	217 (1983) 217
Charpak, G., see Adams	217 (1983) 237
Charpak, G., see Majewski	217 (1983) 265
Charpak, G., see Breskin	220 (1984) 349
Chasman, C. and A.J. Baltz, Space charge effects in a heavy ion cyclotron	219 (1984) 279
Chatelier, M., see Altman	215 (1983) 453
Chatterjee, A.K., see Bose	220 (1984) 547
Chatterton, P.A., Recent developments in vacuum breakdown and discharge physics relevant to accelerator tube design	220 (1984) 73
Chaudhuri, N., see Bose	212 (1983) 539
Chauveau, J., see Andrews	211 (1983) 47
Checchia, P., see Cozza	215 (1983) 89
Chechik, R., see Breskin	217 (1983) 107
Chelnokov, L.P., see Sokol	219 (1984) 336
Chen, A., see Andrews	211 (1983) 47
Chen, H., see Bilello	215 (1983) 291
Chen Hao-Ming, see Børgesen	212 (1983) 517
Chen, M., see Becker	214 (1983) 525
Chen, S.H., see Fisher	219 (1984) 179
Cheng, H.-S., Z.-Y. Zhou, F.-C. Yang, Z.-W. Xu and Y.-H. Den, Depth profiling of hydrogen in thin films with the elastic recoil detection technique	218 (1983) 601
Cheng, V.K., see Fink	218 (1983) 171
Cheng, V.K., see Fink	218 (1983) 817



- Chepigin, V.I., S.V. Stepanov, S. Nagy, G.M. Ter-Akopian and A.S. Voronin, A double ionization chamber for fission fragment detection . . . . . 220 (1984) 419
- Cheremukhina, G.A., see Abdushukurov . . . . . 217 (1983) 101
- Chernenko, S.P., see Abdushukurov . . . . . 217 (1983) 101
- Chernyatin, V., see Fabjan . . . . . 216 (1983) 105
- Cherubini, R., see Cernigoi . . . . . 211 (1983) 129
- Chevarier, A. and N. Chevarier, Time of flight spectrometry in heavy ion backscattering analysis . . . . . 218 (1983) 1
- Chevarier, A., see Thomas . . . . . 218 (1983) 125
- Chevarier, N., see Chevarier, A. . . . . 218 (1983) 1
- Chevarier, N., see Thomas . . . . . 218 (1983) 125
- Chiarella, V., see Battistoni . . . . . 217 (1983) 429
- Chiarella, V., see Battistoni . . . . . 217 (1983) 433
- Chiarella, V., see Battistoni . . . . . 219 (1984) 300
- Chiba, J., see Aihara . . . . . 217 (1983) 259
- Chiba, K., see Kokame . . . . . 213 (1983) 317
- Chien, C.-Y., see Aihara . . . . . 217 (1983) 259
- Childress, S., see Adams . . . . . 217 (1983) 237
- Chin, Y., Longitudinal stability limit for electron bunches in a double RF system . . . . . 215 (1983) 501
- Chirikov-Zorin, I.E., see Barabash . . . . . 211 (1983) 331
- Chirovsky, L.M., W.-P. Lee, A.M. Sabbas, A.J. Becker, J.L. Groves and C.S. Wu, Nuclear orientation facility for the study of the angular distribution of  $\gamma$  radiation and  $\beta$  particles emitted by polarized nuclei . . . . . 219 (1984) 103
- Chistyakov, R.R., see Gott . . . . . 214 (1983) 463
- Chmielewska, D., see Sujkowski . . . . . 219 (1984) 111
- Christmas, P., S.M. Judge, T.B. Ryves, D. Smith and G. Winkler, The decay scheme of  $^{64}\text{Cu}$  . . . . . 215 (1983) 397
- Chu, W.K., see Picraux . . . . . 218 (1983) 57
- Chu, W.K., J.A. Ellison, S.T. Picraux, R.M. Biefeld and G.C. Osbourn, Planar dechanneling studies of strained-layer superlattice structures . . . . . 218 (1983) 81
- Chu, Y.Y., see Mirzadeh . . . . . 216 (1983) 149
- Chumakov, A.I., A.B. Dubrovin and G.V. Smirnov, A proportional electron counter for Mössbauer gamma-ray- and X-ray-crystal interaction studies under diffraction conditions . . . . . 216 (1983) 505
- Chung, C., see Schmid . . . . . 211 (1983) 287
- Chung, S.-U., see Albrow . . . . . 214 (1983) 201
- Chuong, P.N., see Sokol . . . . . 219 (1984) 336
- Church, D.A., Near-thermal multi-charged ion interactions with hydrogen . . . . . 214 (1983) 9
- Cihangir, S., see Chandlee . . . . . 215 (1983) 369
- Cihangir, S., see Nelson . . . . . 216 (1983) 381
- Ciocio, A., see Battistoni . . . . . 217 (1983) 429
- Cipolla, S.J. and M.E. Mildebrath, Multiple-collision analysis of characteristic X-rays from low-energy  $\text{Ar}^{2+}$  traveling in solid targets . . . . . 218 (1983) 777
- Citron, A., see Bauer . . . . . 214 (1983) 189
- Cizewski, J.A., see Becker . . . . . 211 (1983) 379
- Clapier, F. and C.S. Zaidins, Neutron dose equivalent rates due to heavy ion beams . . . . . 217 (1983) 489
- Clark, A.R., see Aihara . . . . . 217 (1983) 259
- Clark, G.J., see Baglin . . . . . 218 (1983) 445
- Clarke, D., see Dietrich . . . . . 217 (1983) 160
- Clausnitzer, G., see Baumgart . . . . . 215 (1983) 319
- Clayton, E., BATTY83: a computer program for thick target PIXE analysis . . . . . 218 (1983) 221
- Clayton, E., see Bird . . . . . 218 (1983) 525
- Clear, J., see Fegan . . . . . 211 (1983) 179
- Clegg, T.B., P.W. Schmor, C. Jacquot, M. Delaunay, J.C. Rocco, R. Geller and G. Roy, The application of the electron-cyclotron resonance source to Lamb-shift polarized ion sources . . . . . 212 (1983) 5
- Clegg, T.B., see Westerfeldt . . . . . 219 (1984) 284
- Cleland, W.E., D.E. Kraus, J.A. Thompson and P. Ambs, Optical trigger processor for high energy physics . . . . 216 (1983) 405
- Cleveland, B.T., The analysis of radioactive decay with a small number of counts by the method of maximum likelihood . . . . . 214 (1983) 451
- Clifft, R., see Albanese . . . . . 212 (1983) 111
- Cline, T., see Paciesas . . . . . 215 (1983) 261
- Close, D.A., L.A. Franks and S.M. Kocinski, The application of thermal neutron capture gamma rays to matrix identification in a transuranic waste assay system based on an electron accelerator . . . . . 220 (1984) 531
- Clover, M.R., see Sondheim . . . . . 219 (1984) 97
- Cobb, J.H., see Albanese . . . . . 212 (1983) 111

- Coceva, C., R. Simonini and D.K. Olsen, Calculation of the ORELA neutron moderator spectrum and resolution function . . . . . 211 (1983) 459
- Cockerill, D., see Adam . . . . . 217 (1983) 291
- Cockerill, D.J.A., see Albrow . . . . . 214 (1983) 201
- Cohen, B.L., M. El Ganayni and E.S. Cohen, Large scintillation cells for high sensitivity radon concentration measurements . . . . . 212 (1983) 403
- Cohen, C., J.A. Davies, A.V. Drigo and T.E. Jackman, Intercomparison of absolute standards for RBS studies . . . . . 218 (1983) 147
- Cohen, D.D., see Bird . . . . . 218 (1983) 53
- Cohen, D.D., L subshell ionization cross section for light ion bombardment of high  $Z$  targets . . . . . 218 (1983) 795
- Cohen, E.R. and A.H. Wapstra, Recommended treatment of precision measurements related to nuclear energy levels and atomic masses . . . . . 211 (1983) 153
- Cohen, E.S., see Cohen . . . . . 212 (1983) 403
- Cohn, S.H., see Vartsky . . . . . 213 (1983) 437
- Coignet, G., see Albanese . . . . . 212 (1983) 111
- Collick, B., see Chandlee . . . . . 215 (1983) 369
- Collick, B., see Nelson . . . . . 216 (1983) 381
- Colton, E., see Spinka . . . . . 211 (1983) 239
- Colton, R.J., Secondary ion mass spectrometry: high-mass molecular and cluster ions . . . . . 218 (1983) 276
- Combley, F., see Albanese . . . . . 212 (1983) 111
- Comby, G., J. Quidort and J.L. Augueres, Readout for multineedle detectors . . . . . 217 (1983) 345
- Comparat, V., see Ballon . . . . . 217 (1983) 213
- Conetti, S., see Areti . . . . . 212 (1983) 135
- Conetti, S., see Cox . . . . . 219 (1984) 487
- Conetti, S., see Cox . . . . . 219 (1984) 491
- Cong, P.J., see Wang . . . . . 218 (1983) 669
- Connell, K.A., see James . . . . . 212 (1983) 545
- Connolly, J.F., see Bateman . . . . . 217 (1983) 77
- Connolly, R.C., see Lefevre . . . . . 218 (1983) 39
- Connolly, R.C., see Overley . . . . . 218 (1983) 43
- Conradie, J., see Lombaard . . . . . 216 (1983) 293
- Cookson, J.A., see Campbell . . . . . 212 (1983) 427
- Cookson, J.A. and J.L. Campbell, Specimen surface effects in thick-target PIXE analysis . . . . . 216 (1983) 489
- Cooper, A., see Ophel . . . . . 217 (1983) 383
- Cooper, M.D., see Bolton . . . . . 217 (1983) 173
- Cooper, M.J., see Holt . . . . . 213 (1983) 447
- Cooper, P.N., see Eskandari . . . . . 216 (1983) 15
- Cooper, S.R.W., see Nelson . . . . . 216 (1983) 381
- Corkidi, G., see Flores . . . . . 212 (1983) 375
- Cormier, T.M., M.G. Herman, B.S. Lin and P.M. Stwertka, Performance of a recoil mass spectrometer . . . . . 212 (1983) 185
- Cornelius, W.D., see Mori . . . . . 220 (1984) 264
- Cornelissen, M., see Albanese . . . . . 212 (1983) 111
- Cornick, G.G., see Sobottka . . . . . 220 (1984) 575
- Corsten, C.J.A. and H.L. Hagedoorn, Simultaneous treatment of betatron and synchrotron motions in circular accelerators . . . . . 212 (1983) 37
- Corsten, C.J.A. and H.L. Hagedoorn, Some applications of a general theory on coupling between transverse and longitudinal oscillation modes in circular accelerators . . . . . 212 (1983) 47
- Corsten, C.J.A. and H.L. Hagedoorn, Stopband widths in non-linear sum resonances . . . . . 216 (1983) 25
- Corvisiero, P., see Taiuti . . . . . 211 (1983) 135
- Corvisiero, P., see Capitani . . . . . 216 (1983) 307
- Costa, E., see Massaro . . . . . 219 (1984) 134
- Costa, F., see Albanese . . . . . 212 (1983) 111
- Costlow, H., see Paciesas . . . . . 215 (1983) 261
- Côté, A., J. Pouliot, R. Labrie, R. Roy et R. Bertrand, Système de centrage automatique pour un faisceau d'accélérateur . . . . . 219 (1984) 456
- Côté, J.-E., see Roy . . . . . 215 (1983) 409
- Cottingham, W.B., see Spinka . . . . . 211 (1983) 239
- Cottman, B.H., see Distelbrink . . . . . 217 (1983) 351
- Cottman, B.H., S.A. Dytman and J.A. Nelson, Calculation of the collimated bremsstrahlung flux from thin radiators . . . . . 220 (1984) 512
- Coughlan, J., see Albanese . . . . . 212 (1983) 111
- Coupland, M., A method for measuring the wire tensions in proportional and drift chambers . . . . . 211 (1983) 369

Court, G.R., see Albanese	212 (1983) 111
Courtain, A., see Dei-Cas	220 (1984) 165
Courtois, A., see Faure	219 (1984) 243
Courtois, A., see Faure	219 (1984) 449
Coutrakon, G., see Mangeot	216 (1983) 79
Coutrakon, G., see Adams	217 (1983) 237
Cowern, N.E.B., C.J. Woods and C.J. Sofield, The gas–solid density effect for MeV/u ions: charge changing cross sections and the effective charge	216 (1983) 287
Cox, A.J., see Anvarian	217 (1983) 483
Cox, B., see Areti	212 (1983) 135
Cox, B., G. Hale, P.O. Mazur, R.L. Wagner, D.E. Wagoner, H. Areti, S. Conetti, P. Lebrun, T. Ryan, J.E. Brau and R.A. Gearhart, A measurement of the response of an SCG1-C scintillation glass shower detector to 2–17.5 GeV positrons	219 (1984) 487
Cox, B., G. Hale, P.O. Mazur, R.L. Wagner, D.E. Wagoner, H. Areti, S. Conetti, P. Lebrun, T. Ryan and R.A. Gearhart, High energy electromagnetic shower position measurement by a fine grained scintillation hodoscope	219 (1984) 491
Cozza, C., L. Ventura, G. Zumerle and P. Checchia, Test results and practical evaluation of a magnetic field tolerant electromagnetic shower detector, based on a lead glass scintillator sandwich	215 (1983) 89
Cramer, J.G., D.W. Storm and R. Vandenbosch, The University of Washington superconducting booster project	220 (1984) 204
Crandall, D.H., Electron–ion collisions of fusion interest	214 (1983) 129
Crawford, J.F., A non-iterative method for fitting circular arcs to measured points ( <i>Letter to the Editor</i> )	211 (1983) 223
Crittenden, J., see Adams	217 (1983) 237
Csorna, S., see Ehrlich	211 (1983) 17
Csorna, S.E., see Andrews	211 (1983) 47
Cundy, D.C., see Battistoni	219 (1984) 300
Cunningham, R.A., see Sanderson	219 (1984) 250
Cutts, D., see Engelmann	216 (1983) 45
Cynshi, O., see Nakamura	212 (1983) 173
Cypres, M., see Bauwens	216 (1983) 349
Dabrowski, A.J., W.M. Szymczyk, J.S. Iwanczyk, K.H. Kusmiss, W.E. Drummond and L. Ames, Progress in energy resolution of mercuric iodide (HgI <sub>2</sub> ) X-ray spectrometers	213 (1983) 89
Dabrowski, A.J., see Szymczyk	213 (1983) 115
Dabrowski, A.J., see Iwanczyk	213 (1983) 123
Daehnick, W.W. and J.M. Niedra, Position-sensitive counter telescope for light and heavy ions	220 (1984) 377
D'Agostini, G., see Albanese	212 (1983) 111
D'Agostini, G., J.P. Albanese, J.J. Aubert, C. Benchouk, E. Kajfasz, R. Nacasch and P. Payre Time-of-flight resolution for a long scintillator counter	219 (1984) 495
Dahl, O.I., see Aihara	217 (1983) 259
Dahlinger, M., W. Bonin, E. Kankeleit and H. Backe, An electrostatic separator for heavy recoil nuclei	219 (1984) 513
Dalglisch, R.L., A.M. Smith and S. Hughes, Geometric aberration correction in ion lenses – the Caledonian quadruplet	215 (1983) 9
Dalglisch, R.L., T. Winchester and A.M. Smith, A new concept for improved ion and electron lenses-aberration corrected systems of planar electrostatic deflection elements	218 (1983) 7
Dalla Torre-Colautti, S., see Azaiez	211 (1983) 335
Dalmas, J., see Głowacka	216 (1983) 303
Damerell, C.J.S., see Bailey	213 (1983) 201
Damjanovich, R., see Bowman	216 (1983) 399
Damjantschitsch, H., M. Weiser, G. Heusser, S. Kalbitzer and H. Mannsperger, An in-beam-line low-level system for nuclear reaction $\gamma$ -rays	218 (1983) 129
Damjantschitsch, H., see Frech	218 (1983) 500
Damon, P.E., see Donahue	218 (1983) 425
Dandine, A., see Dei-Cas	220 (1984) 165
Danilov, M., H. Hasemann, P. Kim, E. Michel, V. Nagovizin, W. Schmidt-Parzefall and R. Wurth, The ARGUS drift chamber	217 (1983) 153
Darbo, G., see Benso	217 (1983) 194
Dau, W.D., see Albanese	212 (1983) 111
Dauchy, A., see Pastor	212 (1983) 209
Daum, C., H. Dijkstra, D. Gosman, C. Hardwick, L. Hertzberger, W. Hoogland, G. de Rijk, H. Tiecke and L. Wiggers, On-line event selection with the FAMP microprocessor system	217 (1983) 361
Daum, M., see Eaton	219 (1984) 34



- Daumann, H., see Abt ..... 217 (1983) 377
- Davarya, F., see Andreadis ..... 218 (1983) 747
- Davies, J.A., T.E. Jackman, H. Plattner and I. Bubb, Absolute calibration of  $^{14}\text{N}(\text{d}, \alpha)$  and  $^{14}\text{N}(\text{d}, \text{p})$  reactions for surface adsorption studies ..... 218 (1983) 141
- Davies, J.A., see Cohen ..... 218 (1983) 147
- Davies, J.A., see Amsel ..... 218 (1983) 177
- Davies, J.A., see Williams ..... 218 (1983) 299
- Davies, J.A., see MacDonald ..... 218 (1983) 765
- Davies, J.K., see Albanese ..... 212 (1983) 111
- Davis, A., see Albanese ..... 212 (1983) 111
- Davis, S.V., see Beech ..... 220 (1984) 170
- Dawson, L.R., see Picraux ..... 218 (1983) 57
- Day, C., see Barbaro-Galtieri ..... 213 (1983) 223
- Day, C.T., see Aihara ..... 217 (1983) 259
- De Boer, J., see Schandera ..... 217 (1983) 128
- De Boer, W., see Binder ..... 217 (1983) 285
- De Bouard, X., see Albanese ..... 212 (1983) 111
- De Bruin, M., see Bode ..... 216 (1983) 529
- De Coster, J.M., see Roussel ..... 211 (1983) 215
- De Felice, P., R. Ocone, A. Rindi, J. Tuyn, R. Deltenre and G. Roubaud, High energy proton interactions with Sr and Cs ..... 212 (1983) 359
- De Haas, A.P., see Van der Borg ..... 220 (1984) 115
- De La Torre, A., see Albanese ..... 212 (1983) 111
- De Lima, E.P., see Ribeirete ..... 214 (1983) 561
- De Marzo, C., M. De Palma, A. Distante, C. Favuzzi, R. Ferorelli, P. Lavopa, G. Maggi, M. Perchiazzi, F. Posa, A. Ranieri, G. Selvaggi, P. Spinelli, F. Waldner, J. Fent, P. Freund, H. Fessler, R. Kalbach, A. Manz, P. Polakos, K.P. Pretzl, T. Schouten, P. Seyboth, J. Seyerlein and D. Vranic, A segmented photon-hadron calorimeter using a two coloured wavelength shifter optical readout system ..... 217 (1983) 405
- De Palma, M., C. Favuzzi, G. Maggi, A. Ranieri, G. Selvaggi, P. Spinelli, H.J. Gebauer, J. Fent, P. Freund, J. Seyboth and J. Seyerlein, A system of large multiwire proportional chambers for a high intensity experiment ..... 216 (1983) 393
- De Palma, M., C. Favuzzi, G. Maggi, A. Ranieri, G. Selvaggi, P. Spinelli, H.J. Gebauer, J. Fent, P. Freund, J. Seyboth and J. Seyerlein, A system of large multiwire proportional chambers for a high intensity experiment ..... 217 (1983) 135
- De Palma, M., see De Marzo ..... 217 (1983) 405
- De Palma, M., C. Favuzzi, G. Maggi, E. Nappi, A. Ranieri and P. Spinelli, Measurement, parametrization and fast simulation of hadronic showers in lead ..... 219 (1984) 87
- De Pedis, D., see Jonker ..... 215 (1983) 361
- De Penquer, Y., see Dei-Cas ..... 220 (1984) 165
- De Renzi, R., see Tedeschi ..... 214 (1983) 509
- De Rijk, G., see Daum ..... 217 (1983) 361
- De Sanctis, E., see Capitani ..... 216 (1983) 307
- De Vries, A.E., see Haring ..... 211 (1983) 529
- De Witt Huberts, P.K.A., see Postma ..... 219 (1984) 292
- De Witt Huberts, P.K.A., see Distelbrink ..... 220 (1984) 433
- De Zwart, S.T., see Koeleman ..... 218 (1983) 225
- Dean, A.J., see Ubertini ..... 217 (1983) 97
- Decman, D.J., E.A. Henry, J. Kantele, L.G. Mann, W. Stöfl, R.J. Estep and L.E. Ussery, Electron spectroscopy in coincidence with protons from the (t, p) reaction ..... 219 (1984) 523
- Deconninck, G. and B. Van Oystaeyen, High resolution depth profiling of F, Ne and Na in materials ..... 218 (1983) 165
- Dei-Cas, R., J. Bardy, A. Courtain, A. Dandine, J.P. Gueguen, P. Jouy, J.P. Laget, J. Pottier, Y. de Penquer and M. Renaud, Improvement of the energy resolution of a time-of-flight neutron spectrometer by using a high energy RF buncher ..... 220 (1984) 165
- Deicher, M., see Wichert ..... 218 (1983) 633
- Del Guerra, A., see Perez-Mendez ..... 217 (1983) 89
- Del Guerra, A., see Bellazzini ..... 217 (1983) 93
- Del Guerra, A., see Perez-Mendez ..... 217 (1983) 255
- Del Guerra, A., see Hirayama ..... 220 (1984) 327
- Delaney, C.F.G. and E.C. Finch, Rise and plasma times in semiconductor detectors ..... 215 (1983) 219
- Delaunay, M., see Clegg ..... 212 (1983) 5
- Delaunay, M., S. Dousson, R. Geller et B. Jacquot, Essais de production d'ions métalliques dans la source d'ions multichargés MinimaFios ..... 213 (1983) 165
- Delcourt, B., see Ahmad ..... 217 (1983) 169



- Deline, V.R., Instrumental cross-contamination in the Cameca IMS-3F secondary ion microscope . . . . . 218 (1983) 316
- Della Mea, G., J.-C. Dran, J.-C. Petit, G. Bezzon and C. Rossi-Alvarez, Use of ion beam techniques for studying the leaching properties of lead implanted silicates . . . . . 218 (1983) 493
- Delpierre, P., see Aihara . . . . . 217 (1983) 259
- Deltenre, R., see De Felice . . . . . 212 (1983) 359
- Delunas, A., V. Maxia and S. Serici, Some remarks on the statistical correlation of Mössbauer spectra (*Letter to the Editor*) . . . . . 213 (1983) 563
- Delvasto, R., see Slaughter . . . . . 215 (1983) 443
- Delvaux, M., see Bertrand . . . . . 218 (1983) 249
- Demortier, G., see Van Oystaeyen . . . . . 215 (1983) 299
- Den Boggende, A.J.F. and C.J. Schrijver, Electron cloud sizes in gas-filled detectors . . . . . 220 (1984) 561
- Denecke, B., see Nylandsted Larsen . . . . . 219 (1984) 339
- Dengler, F., see Albanese . . . . . 212 (1983) 111
- Denisov, E.I., see Filatova . . . . . 211 (1983) 353
- Denisov, S.P., see Cerri . . . . . 214 (1983) 217
- Denni, U., see Battistoni . . . . . 217 (1983) 429
- Denni, U., see Battistoni . . . . . 217 (1983) 433
- Derado, I., see Albanese . . . . . 212 (1983) 111
- Derby, K.A., see Aihara . . . . . 217 (1983) 259
- Derenzo, S.E., Gamma-ray spectroscopy using small, cooled bismuth germanate scintillators and silicon photodiodes . . . . . 219 (1984) 117
- Derry, T.E., C.C.P. Madiba and J.P.F. Sellschop, Oxygen and hydrogen on the surface of diamond . . . . . 218 (1983) 559
- D'Ettorre-Piazzoli, B., see Battistoni . . . . . 217 (1983) 433
- D'Ettorri Piazzoli, B., see Battistoni . . . . . 219 (1984) 300
- Devito, R.P., S.M. Austin, U.E.P. Berg, W. Sterrenburg and L.E. Young, Techniques for measuring neutron scattering cross sections with a beam swinger . . . . . 215 (1983) 423
- Devries, R.M., see Sondheim . . . . . 219 (1984) 97
- DeWire, J.W., see Andrews . . . . . 211 (1983) 47
- Di Ciaccio, A., see Carosi . . . . . 219 (1984) 311
- Di Cocco, G., see Ubertini . . . . . 217 (1983) 97
- Di Drusco, M., see Azaiez . . . . . 211 (1983) 335
- Di Giacomo, P., see Capitani . . . . . 216 (1983) 307
- Di Liberto, S., see Baroni . . . . . 214 (1983) 381
- Dietrich, G., P. Steffen, W. Wietbrock, D. Clarke, C.R. Hedgecock and R. Marshall, A large polygon drift chamber for the JADE experiment at PETRA . . . . . 217 (1983) 160
- Dietzsch, O., see Koide . . . . . 215 (1983) 61
- Dietzsch, O., see Koide . . . . . 215 (1983) 177
- Digiacomio, N.J., see Sondheim . . . . . 219 (1984) 97
- Dijkstra, H., see Daum . . . . . 217 (1983) 361
- Dimitrov, V., see Vapirev . . . . . 219 (1984) 376
- Distante, A., see De Marzo . . . . . 217 (1983) 405
- Distelbrink, J.H.J. and B.H. Cottman, A high speed driftchamber readout system: "TIRUS" . . . . . 217 (1983) 351
- Distelbrink, J.H.J., E. Kok, H. Blok, J.L. Visschers and P.K.A. De Witt Huberts, A fast and flexible focal-plane detection system for electron scattering experiments . . . . . 220 (1984) 433
- Ditta, J., D. Sillou, A. Michalowicz, H. Azaiez and K. Kuroda, High resolution scintillation hodoscope using a position sensitive photomultiplier . . . . . 220 (1984) 343
- Ditzler, W.R., see Spinka . . . . . 211 (1983) 239
- Dixon, D.R., G.L. Jensen, S.M. Morrill, R.L. Walter and C.R. Gould, Multiple scattering of protons and deuterons by thick foils . . . . . 213 (1983) 525
- Dixon, D.R., see Jensen . . . . . 220 (1984) 406
- Dixon, G.J., see Todd . . . . . 219 (1984) 575
- Dixon, R., see Engelmann . . . . . 216 (1983) 45
- Dobiasch, H., see Klages . . . . . 219 (1984) 269
- Dobinson, R.W., see Albanese . . . . . 212 (1983) 111
- Dobma, W., see Mitchell . . . . . 218 (1983) 91
- Dolgoshein, B., see Fabjan . . . . . 216 (1983) 105
- Doll, P., see Klages . . . . . 219 (1984) 269
- Donahue, D.J., A.J.T. Jull, T.H. Zabel and P.E. Damon, The use of accelerators for archaeological dating . . . . . 218 (1983) 425
- Donahue, D.J., see Jull . . . . . 218 (1983) 509
- Donnelly, S.E., see Bodart . . . . . 218 (1983) 529
- Donnet, R., see Jonker . . . . . 215 (1983) 361

- Donskov, S.V., see Binon . . . . . 214 (1983) 269
- Dörfel, G., W. Kluge and M. Kubsch, A pseudorandom pulser technique for the correction of dead-time and pile-up losses in  $\gamma$ -ray spectrometry . . . . . 214 (1983) 435
- Dörschel, B., F. Pfützner, G. Streubel, J. Knorr and W. Paul, Neutron detection using MOS breakdown counters combined with fissile radiators . . . . . 216 (1983) 227
- Dosselli, U., see Albanese . . . . . 212 (1983) 111
- Dotson, D.W., see Mikesell . . . . . 215 (1983) 561
- Dousson, S., see Delaunay . . . . . 213 (1983) 165
- Dowdy, E.J., see Robba . . . . . 215 (1983) 473
- Dowdy, E.J., see Moss . . . . . 219 (1984) 558
- Downing, R.G., R.F. Fleming, J.K. Langland and D.H. Vincent, Neutron depth profiling at the National Bureau of Standards . . . . . 218 (1983) 47
- Doyle, B.L., Non-vacuum Rutherford backscattering spectrometry . . . . . 218 (1983) 29
- Drain, D., see Pastor . . . . . 212 (1983) 209
- Drake, D.M., see Robertson . . . . . 214 (1983) 541
- Drake, T.E., see Sobie . . . . . 219 (1984) 501
- Dran, J.-C., see Della Mea . . . . . 218 (1983) 493
- Drees, J., see Albanese . . . . . 212 (1983) 111
- Drescher, A., H.J. Graf, B. Gräwe, W. Hofmann, A. Markees, U. Matthiesen, J. Spengler and D. Wegener, The ARGUS electron/photon calorimeter. II. Properties of the light collection system of the lead/scintillator shower counters . . . . . 216 (1983) 35
- Drexler, J., R.D. Fischer, R. Heil, K. Huber, U. Kneissl, G. Mank, R. Ratzek, H. Ries, H. Ströher, T. Weber and W. Wilke, Arrangements of parallel plate avalanche detectors for electrofission and photofission experiments . . . . . 220 (1984) 409
- Drigo, A.V., see Cohen . . . . . 218 (1983) 147
- Dris, M., see Amendolia . . . . . 217 (1983) 317
- Droege, T., see Nelson . . . . . 216 (1983) 381
- Drouet, A., see Louvel . . . . . 211 (1983) 535
- Drummond, W.E., see Dabrowski . . . . . 213 (1983) 89
- Dubail, L., see Altman . . . . . 215 (1983) 453
- Dubrovín, A.B., see Chumakov . . . . . 216 (1983) 505
- Ducassou, D., see More . . . . . 214 (1983) 531
- Dudelzak, B., P. Eschstruth, B. Grelaud, S. Jullian, D. Lalanne, F. Laplanche, C. Longuemare, C. Paulot, Ph. Roy and G. Szklarz, Geiger tube planes as a trigger for the nucleon lifetime experiment in the Frejus tunnel (France) . . . . . 217 (1983) 208
- Duerden, P., see Bird . . . . . 218 (1983) 53
- Dugar-Zhabon, V.D., K.S. Golovanivsky and S.A. Safonov, An ECR source of multiply charged ions HELIOS-12A . . . . . 219 (1984) 263
- Dulinski, W. and T. Ekelöf, A multistep avalanche chamber with charge-division read-out as a single-photon detector for ring imaging Cherenkov counters . . . . . 217 (1983) 244
- Dumont, J.J., see Albanese . . . . . 212 (1983) 111
- Dunham, J.S., C.S. Galovich, H.F. Glavish, S.S. Hanna, D.G. Mavis and S.W. Wissink, Polarized gas jet targets . . . . . 219 (1984) 46
- Durand, A., see Thouroude . . . . . 212 (1983) 53
- Durell, J.L., see Sanderson . . . . . 219 (1984) 250
- Durgaprasad, N., see Kukreja . . . . . 219 (1984) 196
- Durouchoux, Ph., see Paciesas . . . . . 215 (1983) 261
- Duteil, P., see Binon . . . . . 214 (1983) 269
- Dvornik, I., see Ranogajec-Komor . . . . . 212 (1983) 383
- Dwurażny, A., K. Jeleń and E. Rulikowska Zarębska, Inorganic gas mixtures for proportional counters . . . . . 217 (1983) 301
- Dytlewski, N., see Ahsan . . . . . 212 (1983) 333
- Dytman, S.A., see Cottman . . . . . 220 (1984) 512
- Farle, F.D., see Lone . . . . . 214 (1983) 333
- Earwaker, L.G., J.P.G. Farr, I. Alexander, I.M. Sturland and J.M. Keen, Determination of the fluorine distribution in porous silicon using nuclear reaction, XPS and Auger analyses . . . . . 218 (1983) 481
- Earwaker, L.G., see Bentley . . . . . 218 (1983) 555
- Eastham, D.A., P.S. Powell, R. Thorn, S.L. Ooi and S.A. Woods, A study of the NSF laddertron . . . . . 220 (1984) 90
- Eastham, D.A., Voltage limitations of electrostatic accelerators . . . . . 220 (1984) 101
- Eaton, G.H., A. Carne, D.H. Reading and E.G. Sandels, A pulsed surface muon beam/pion beam for the Rutherford Appleton Laboratory spallation neutron source . . . . . 214 (1983) 151
- Eaton, G.H., M. Daum, R. Frosch and P.-R. Kettle, On the use of Soller collimators in surface muon beams . . . . . 219 (1984) 34

- Ebana, M., see Iida . . . . . 212 (1983) 413
- Eberhard, B.H., see Aihara . . . . . 217 (1983) 259
- Eberl, J., see Elsener . . . . . 219 (1984) 519
- Eckardt, V., see Albanese . . . . . 212 (1983) 111
- Eckardt, V. and S. Wenig, Development of a small high-pressure streamer chamber for charm-lifetime measurements . . . . . 213 (1983) 217
- Eckstein, W., see Schneider . . . . . 218 (1983) 713
- Eckstein, W., see Roth . . . . . 218 (1983) 751
- Edberg, T., see Blocker . . . . . 216 (1983) 71
- Edwards, A., see Albanese . . . . . 212 (1983) 111
- Edwards, M., see Albanese . . . . . 212 (1983) 111
- Egelhof, P., see Weller . . . . . 220 (1984) 425
- Egger, J., see Herold . . . . . 217 (1983) 277
- Ehrlich, R., T. Gentile, Y. Kubota, S. Stone, R. Talman, R. Wilcke, M.S. Alam, S. Csorna, R.G. Hicks, R. Panvini and J. Poucher, Particle identification by ionization measurements: description of the CLEO dE/dx system . . . . . 211 (1983) 17
- Ehrlich, R., see Andrews . . . . . 211 (1983) 47
- Ehrmann, C., see Paciesas . . . . . 215 (1983) 261
- Eichinger, P., L. Qiong and R. Leutenecker, Application of the Bragg-profiling technique to the analysis of metallurgical and optical surface layers . . . . . 218 (1983) 489
- Einsweiler, K., see Toki . . . . . 219 (1984) 479
- Eiseman, S., A. Etkin, K.J. Foley, R.S. Longacre, W.A. Love, T.W. Morris, S. Ozaki, E.D. Platner, V.A. Polychronakos, A.C. Saulys, C.D. Wheeler, S.J. Lindenbaum, M.A. Kramer and Y. Teramoto, The MPS II drift chamber system . . . . . 217 (1983) 140
- Eisen, Y., G. Engler, E. Ovadai and Y. Shamaï, A combined real time wide energy range neutron dosimeter and survey meter for high neutron dose rates with Si surface barrier detectors . . . . . 211 (1983) 171
- Eisler, P., T. Lwin, G. Nelson and S. Youl, Simultaneous determination of exponential background and Gaussian peak functions in gamma ray scintillation spectrometers by maximum likelihood technique . . . . . 214 (1983) 421
- Ekelöf, T., see Dulinski . . . . . 217 (1983) 244
- Ekstedt, T., see Amano . . . . . 218 (1983) 589
- El Ganayni, M., see Cohen . . . . . 212 (1983) 403
- El-Konsol, S., see Morsi . . . . . 217 (1983) 495
- Elfström, S., L. Hildingsson, D. Jerrestam and Th. Lindblad, A multi-purpose NaI(Tl) detector system . . . . . 214 (1983) 311
- Elliman, R.G., see Rossiter . . . . . 218 (1983) 639
- Ellis, K.J., see Vartsky . . . . . 213 (1983) 437
- Ellis, W.P., see Thompson . . . . . 218 (1983) 475
- Ellison, J.A., see Chu . . . . . 218 (1983) 81
- Elsener, K., V. König, W. Grüebler and J. Eberl, Absolute calibration of a Compton polarimeter for 110 keV  $\gamma$ -rays . . . . . 219 (1984) 519
- Enagonio, J., see Areti . . . . . 212 (1983) 135
- Engelhardt, D., see Oed . . . . . 219 (1984) 569
- Engelmann, C. and J. Bardy, The French AEC nuclear microprobe: description and first application examples . . . . . 218 (1983) 209
- Engelmann, R., L. Godfrey, P.D. Grannis, D. Hedin, D.E. Jaffe, T. Kafka, M.D. Marx, R. Dixon, H. Jostlein, P. Franzini, D. Cutts, R.E. Lanou and S. Aronson, Response of a highly segmented extruded lead glass calorimeter to electrons and pions between 15 and 45 GeV/c . . . . . 216 (1983) 45
- England, J.B.A., see Bailey . . . . . 213 (1983) 517
- England, J.B.A., S.D. Hoath, T.R. Ophel and B.R. Fulton, A simple method for direct compensation for kinematic energy spread using a silicon PSD . . . . . 214 (1983) 305
- Engler, G., see Eisen . . . . . 211 (1983) 171
- Engler, J., Electromagnetic calorimeters using wire chambers . . . . . 217 (1983) 9
- English, R.L., see Bailey . . . . . 213 (1983) 201
- Engster, C., see Kernel . . . . . 214 (1983) 273
- Engström, Å., see Lindblad . . . . . 215 (1983) 183
- Epstein, M.B., see Bracco . . . . . 219 (1984) 329
- Erasmus, C.S., see Annegarn . . . . . 218 (1983) 33
- Erb, K.A., see Jones . . . . . 220 (1984) 1
- Erdman, K.L., see Sobie . . . . . 219 (1984) 501
- Eriksson, M., see Lindgren . . . . . 214 (1983) 175
- Eriksson, M., see Lindgren . . . . . 214 (1983) 179
- Erkilla, B., see Becker . . . . . 211 (1983) 379
- Erola, M., see Keinonen . . . . . 216 (1983) 249



- Eschbach, H.L., see Mitchell . . . . . 218 (1983) 91
- Eschstruth, P., see Dudelzak . . . . . 217 (1983) 208
- Eskandari, M.R. and P.N. Cooper, Re-adjustment and modifications to a previous method of externally pulsing an accelerator . . . . . 216 (1983) 15
- Eskildsen, S.S. and G. Sørensen, Metal deposition for microelectronic applications studied by RBS technique . . . . . 218 (1983) 485
- Estep, R.J., see Decman . . . . . 219 (1984) 523
- Estrada, J.J.S., see Knöfel . . . . . 212 (1983) 387
- Etkin, A., see Eiseman . . . . . 217 (1983) 140
- Evans, A.E., see Moss . . . . . 219 (1984) 558
- Evans, L.G., J.I. Trombka, D.H. Jensen, W.A. Stephenson, R.A. Hoover, J.L. Mikesell, A.B. Tanner and F.E. Senftle, Inter-pulse high-resolution gamma-ray spectra using a 14 MeV pulsed neutron generator . . . . . 219 (1984) 233
- Evans, W.M., see Albrow . . . . . 214 (1983) 201
- Evsikov, I.I., see Filatova . . . . . 211 (1983) 353
- Exnerova, Ya., I.V. Falomkin, I.Ts. Ivanov, V. Khristov, V.I. Lyashenko, V.A. Panyushkin, G.B. Pontecorvo, Yu.A. Shcherbakov, A. Trifonov, T. Troshev and Ya. Yani, Laser deuterium streamer chamber at 5 atm in self-shunt regime . . . . . 217 (1983) 425
- Fabjan, C.W., W. Willis, S. Maiburov, A. Shmeleva, V. Chernyatin and B. Dolgoshein, Optimization of cluster-counting transition radiation detectors . . . . . 216 (1983) 105
- Fabjan, C.W., see Carosi . . . . . 219 (1984) 311
- Fabris, D., G. Fortuna, F. Gramegna, G. Prete and G. Viesti, The parallel grid avalanche counter . . . . . 216 (1983) 167
- Fagot, J., see Veyssi  re . . . . . 212 (1983) 61
- Falk, W.R., Data reduction from experimental histograms . . . . . 220 (1984) 473
- Fallavier, M., see Thomas . . . . . 218 (1983) 125
- Fallavier, M., see Thomas . . . . . 218 (1983) 579
- Falley, G., see Albanese . . . . . 212 (1983) 111
- Fallou, J.L., see Veyssi  re . . . . . 212 (1983) 61
- Falomkin, I.V., see Exnerova . . . . . 217 (1983) 425
- Fancher, D.L., see Aihara . . . . . 217 (1983) 259
- Fanger, H.-U., see Bahal . . . . . 211 (1983) 469
- Fanger, H.-U., see The . . . . . 212 (1983) 445
- Fanger, H.-U., see Bahal . . . . . 220 (1984) 517
- Faraci, G. and A.R. Pennisi, Experimental dead-time distortions of Poisson processes . . . . . 212 (1983) 307
- Faraci, G. and A.R. Pennisi, Effects of two consecutive non-extended dead times (*Letter to the Editor*) . . . . . 216 (1983) 531
- Farber, B., see Milstein . . . . . 213 (1983) 65
- Farid, S.M. and A.P. Sharma, Study of  $^{16}\text{O}$  ion tracks in cellulose nitrate plastic detectors . . . . . 213 (1983) 513
- Farr, J.P.G., see Earwaker . . . . . 218 (1983) 481
- Farr, J.P.G., see Bentley . . . . . 218 (1983) 555
- Faruqi, A.R., Applications of multiwire proportional chambers in biophysics and medicine . . . . . 217 (1983) 19
- Fass  , A., see Stevenson . . . . . 216 (1983) 99
- Fast, R., see Minemura . . . . . 219 (1984) 472
- Faure, J., B. Feinberg, A. Courtois and R. Gobin, A new operating regime for CRYEBIS . . . . . 219 (1984) 243
- Faure, J., B. Feinberg, A. Courtois and R. Gobin, External ion injection into CRYEBIS . . . . . 219 (1984) 449
- Faust, H.R., Determination of the multipolarity of prompt electromagnetic transitions from angular distributions of conversion electrons. Part I: Method . . . . . 213 (1983) 271
- Faust, H.R., H. Klewe-Nebenius, H. Rebel and K. Wisshak, Determination of the multipolarity of prompt electromagnetic transitions from angular distributions of conversion electrons. Part II: Spectrometer and measurements . . . . . 213 (1983) 277
- Faust, H.R. and F. Bl  nnigen, Some remarks on the spiral orbit spectrometer (*Letter to the Editor*) . . . . . 213 (1983) 545
- Favier, J., see Albanese . . . . . 212 (1983) 111
- Favuzzi, C., see De Palma . . . . . 216 (1983) 393
- Favuzzi, C., see De Palma . . . . . 217 (1983) 135
- Favuzzi, C., see De Marzo . . . . . 217 (1983) 405
- Favuzzi, C., see De Palma . . . . . 219 (1984) 87
- Fazely, A., see Madey . . . . . 214 (1983) 401
- Fazzini, N., see Perez Ferreira . . . . . 220 (1984) 37
- Fazzini, N., H. Gonzalez, J. Nicolai, R. Requejo, E. Ventura, G. Feimberg, G. Gidekel and P. Goldschmidt, The  $\text{SF}_6$  gas handling system for the Buenos Aires 20 MV accelerator . . . . . 220 (1984) 144
- Fazzini, T., A. Giannatiempo and A. Perego, A magnetic transport electron spectrometer for in-beam measurements . . . . . 211 (1983) 125
- Fedunov, A.G., see Barabash . . . . . 211 (1983) 331

- Fegan, D.J., D. McLaughlin, J. Clear, M.F. Cawley and N.A. Porter, Fast large aperture camera and data acquisition system with applications in astrophysics, particle physics and nuclear medicine . . . . . 211 (1983) 179
- Fehlmann, J., see Becker . . . . . 214 (1983) 525
- Feigl, A., see Böttcher . . . . . 219 (1984) 369
- Feimberg, G., see Fazzini . . . . . 220 (1984) 144
- Feinberg, B., see Faure . . . . . 219 (1984) 243
- Feinberg, B., see Faure . . . . . 219 (1984) 449
- Feinberg, B., see Brown . . . . . 220 (1984) 251
- Felawka, L., see Bertl . . . . . 217 (1983) 367
- Feldman, L.C., see MacDonald . . . . . 218 (1983) 765
- Félszerfalvi, J., see Kiss . . . . . 212 (1983) 81
- Feltse, J., see Navarra . . . . . 212 (1983) 125
- Fent, J., H. Fessler, P. Freund, H.J. Gebauer, P. Polakos, K.P. Pretzl, Th. Schouten, P. Seyboth and J. Seyerlein, A segmented scintillator–lead photon calorimeter using a double wavelength shifter optical readout system . . . . . 211 (1983) 315
- Fent, J., see De Palma . . . . . 216 (1983) 393
- Fent, J., see De Palma . . . . . 217 (1983) 135
- Fent, J., see De Marzo . . . . . 217 (1983) 405
- Ferbel, T., see Chandlee . . . . . 215 (1983) 369
- Ferbel, T., see Nelson . . . . . 216 (1983) 381
- Ferguson, T., see Andrews . . . . . 211 (1983) 47
- Ferrero, M.I., see Albanese . . . . . 212 (1983) 111
- Ferroni, F., see Jonker . . . . . 215 (1983) 361
- Ferrorelli, R., see De Marzo . . . . . 217 (1983) 405
- Fessler, H., see Fent . . . . . 211 (1983) 315
- Fessler, H., see De Marzo . . . . . 217 (1983) 405
- Fick, D., see Krämer . . . . . 220 (1984) 123
- Fidecaro, F., see Amendolia . . . . . 217 (1983) 317
- Fields, T. and D. Jankowski, Simple scheme for light collection from large-area plastic scintillators . . . . . 215 (1983) 131
- Fifield, L.K., see Ophel . . . . . 217 (1983) 383
- Figiel, J., see Albanese . . . . . 212 (1983) 111
- Filatova, N.A., A. Forycki, I.I. Evsikov, V.M. Golovatyuk, Z. Guzik, I.M. Ivanchenko, R.B. Kadyrov, N.N. Karpenko, T.S. Nigmanov, V.V. Palchik, V.D. Riabtsov, A.E. Senner, M.D. Shafranov, V.A. Sutulin, E.N. Tsyganov, I.A. Tyapkin, A.S. Vodopianov, J. Wojtkowska, D.V. Uralsky, N.I. Zimin, R.A. Carrigan, Jr., T.E. Toohig, C.S. Carmack, W.M. Gibson, I.-J. Kim, C.-R. Sun, M.D. Bavizhev, N.K. Bulgakov, I.A. Grishaev, G.D. Kovalenko, B.I. Shramenko, E.I. Denisov, V.I. Tumanov, Y.V. Nilsen, B.A. Yuriev, V.V. Avdeichikov and A.N. Isakov, A spectrometer to study spontaneous radiation due to the channeling of high energy electrons and positrons in single crystals . . . . . 211 (1983) 353
- Filatova, N.A., A. Forycki, V.M. Golovatyuk, Z. Guzik, R.V. Kadyrov, T.S. Nigmanov, V.D. Riabtsov, M.S. Shafranov, E.N. Tsyganov, I.A. Tyapkin, D.V. Uralsky, J. Wojtkowska, M.D. Bavizhev, N.K. Bulgakov and A.N. Isakov, Low pressure drift chamber for studies of the radiation from relativistic particles in single crystals . . . . . 215 (1983) 135
- Filevich, A., see Perez Ferreira . . . . . 220 (1984) 37
- Finch, E.C., see Delaney . . . . . 215 (1983) 219
- Finckh, E., see Böttcher . . . . . 219 (1984) 369
- Findlay, D.J.S., A modification to the Penfold–Leiss method of cross-section unfolding . . . . . 213 (1983) 353
- Fine, J., see Simons . . . . . 218 (1983) 585
- Fine, J., see Andreadis . . . . . 218 (1983) 747
- Fink, D., J.P. Biersack, M. Städele, K. Tjan and V.K. Cheng, Nitrogen depth profiling using the  $^{14}\text{N}(\text{n}, \text{p})^4\text{C}$  reaction . . . . . 218 (1983) 171
- Fink, D., Li, B and N in ancient materials . . . . . 218 (1983) 456
- Fink, D., J.P. Biersack, M. Städele, K. Tjan and V.K. Cheng,  $\text{Z}_2$  stopping power oscillations as derived from range measurements . . . . . 218 (1983) 817
- Finlay, R.W., see Randers-Pehrson . . . . . 215 (1983) 433
- Finley, D., see Mangeot . . . . . 216 (1983) 79
- Finley, D., see Adams . . . . . 217 (1983) 237
- Fiorini, E., see Battistoni . . . . . 219 (1984) 300
- Fischer, B.E., A new antireflection treatment for optical surfaces by the nuclear track technique . . . . . 216 (1983) 265
- Fischer, R., see Traxler . . . . . 217 (1983) 121
- Fischer, R.D., see Drexler . . . . . 220 (1984) 409
- Fisher, W.A., S.H. Chen, D. Gwinn and R.R. Parker, A fast neutron spectrometer for D–D fusion neutron measurements at the Alcator C tokamak . . . . . 219 (1984) 179

- Flanders, B., see Watson . . . . . 215 (1983) 413
- Flauger, W., see Albanese . . . . . 212 (1983) 111
- Flegel, W., see Jonker . . . . . 215 (1983) 361
- Flegel, W., see Bénichou . . . . . 217 (1983) 163
- Fleming, R.F., see Downing . . . . . 218 (1983) 47
- Flesher, A.C., see Bateman . . . . . 217 (1983) 77
- Flores, R., L. Ortiz, M. Moreno, G. Corkidi, A. Solar and M. Balcazar-Garcia, Opto-electronic system for automatic track counting in plastic SSNTD . . . . . 212 (1983) 375
- Flores-Llamas, H., see Jiménez-Domínguez . . . . . 219 (1984) 256
- Foley, K.J., see Eiseman . . . . . 217 (1983) 140
- Follstaedt, D.M., see Knapp . . . . . 218 (1983) 542
- Ford, A.L., see Becker . . . . . 214 (1983) 49
- Ford, R.L., see O'Neill . . . . . 216 (1983) 361
- Forster, A., see Obenhuber . . . . . 214 (1983) 361
- Forster, J.S., see Wang . . . . . 218 (1983) 669
- Forstner, C., see Böttcher . . . . . 219 (1984) 369
- Fortuna, G., see Fabris . . . . . 216 (1983) 167
- Forycki, A., see Filatova . . . . . 211 (1983) 353
- Forycki, A., see Filatova . . . . . 215 (1983) 135
- Foster, C.C., see Watson . . . . . 215 (1983) 413
- Foster, J., K. Kouris, I.P. Matthews and N.M. Spyrou, Binomial vs Poisson statistics in radiation studies . . . . . 212 (1983) 301
- Franc, P., J. Krémének, Š. Piskoř and W. Schäferlingová, Least-squares analysis of nuclear reaction spectra . . . . . 211 (1983) 159
- Frandsen, P.K., see Adam . . . . . 217 (1983) 291
- Frank, J.S., see Bolton . . . . . 217 (1983) 173
- Franks, L.A., see Close . . . . . 220 (1984) 531
- Fransson, K., see Blüm . . . . . 213 (1983) 251
- Franzini, P., see Engelmann . . . . . 216 (1983) 45
- Fraser, G.W. and J.F. Pearson, Soft X-ray energy resolution with microchannel plate detectors of high quantum detection efficiency . . . . . 219 (1984) 199
- Frech, G., G.K. Wolf, H. Damjantschitsch, M. Weiser and S. Kalbitzer, Defect trapping of hydrogen in iron studied by the  $^1\text{H}(^{15}\text{N}, \alpha\gamma)^{12}\text{C}$  reaction . . . . . 218 (1983) 500
- Freedman, S.J., G.T. Garvey, M. Kroupa, J. Napolitano and J. Worthington, A liquid scintillator cosmic ray active shield . . . . . 215 (1983) 71
- Frekers, D., see Kutschera . . . . . 220 (1984) 118
- Freund, A.K., Cross-sections of materials used as neutron monochromators and filters . . . . . 213 (1983) 495
- Freund, A.K., On the use of focusing for small-angle scattering experiments . . . . . 216 (1983) 269
- Freund, P., see Fent . . . . . 211 (1983) 315
- Freund, P., see De Palma . . . . . 216 (1983) 393
- Freund, P., see De Palma . . . . . 217 (1983) 135
- Freund, P., see De Marzo . . . . . 217 (1983) 405
- Friedland, E., see Lombaard . . . . . 216 (1983) 293
- Friedland, E., B.J.E. Van Tonder and J.F. Prins, Radiation damage in InSb single crystal by  $\alpha$ -particle bombardment . . . . . 218 (1983) 658
- Friend, B., see Jonker . . . . . 215 (1983) 361
- Friend, B., see Bénichou . . . . . 217 (1983) 163
- Frischkorn, H.J., K.O. Groeneveld, D. Hofmann, P. Koschar, R. Latz and J. Schader, Ion induced electron ejection from solids . . . . . 214 (1983) 123
- Froberger, J.P., see Lecoq . . . . . 213 (1983) 329
- Frolov, A.M., K.I. Gubrienko, V.A. Maisheev, A.I. Mysnik, S.B. Nurushhev and V.L. Solovianov, Radiative moderation of an electron beam by a silicon crystal . . . . . 216 (1983) 93
- Frosch, R., see Eaton . . . . . 219 (1984) 34
- Fujii, H., see Aihara . . . . . 217 (1983) 259
- Fujii, T., Y. Hashimoto, T. Kageyama, K. Nakamura, F. Sai, S. Sakamoto, S. Sato, T. Takahashi, T. Tanimori, Y. Umeda and S.S. Yamamoto, A laser-based TOF monitoring system using a high-speed vacuum photodiode (*Letter to the Editor*) . . . . . 215 (1983) 357
- Fujii, T., see Aihara . . . . . 217 (1983) 259
- Fujine, S., K. Yoneda and K. Kanda, An on-line video image processing system for real-time neutron radiography . . . . . 215 (1983) 277
- Fujino, Y., see Yamaguchi . . . . . 218 (1983) 598
- Fujino, Y., S. Yamaguchi, H. Naramoto and K. Ozawa, A study of mixing behavior of Al–Ag, Al–In and Al–Sn systems by Ar ion irradiation . . . . . 218 (1983) 691



Fujita, J., see Takagi	213 (1983) 539
Fujita, M., see Kokame	213 (1983) 317
Fujita, Y., K. Nagayama, M. Fujiwara, S. Morinobu, T. Yamazaki and H. Ikegami, Two-dimensional focal plane counter with induction readout	217 (1983) 441
Fujita, Y., see Koori	220 (1984) 453
Fujiwara, M., see Fujita	217 (1983) 441
Fujiwara, M., see Koori	220 (1984) 453
Fukui, Y., see Abe	220 (1984) 293
Fukumoto, S., see Mori	220 (1984) 264
Fukushima, Y., see Arai	214 (1983) 209
Fulton, B.R., see England	214 (1983) 305
Fultz, B. and J.W. Morris, Jr., The thickness distortion of $^{57}\text{Fe}$ backscatter Mössbauer spectra ( <i>Letter to the Editor</i> )	211 (1983) 569
Furuta, Y., see Tsubone	215 (1983) 171
Gabathuler, E., see Albanese	212 (1983) 111
Gabioud, B., see Aihara	217 (1983) 259
Galindo, S., see Jiménez-Domínguez	219 (1984) 256
Gallois, B., see Visocekas	214 (1983) 553
Galloway, R.B., see Annand	211 (1983) 421
Galloway, R.B., see Annand	211 (1983) 453
Galovich, C.S., see Dunham	219 (1984) 46
Gamet, R., see Albanese	212 (1983) 111
Ganci, P., see Andrews	211 (1983) 47
Ganev, G.S., see Vankov	214 (1983) 395
Gardner, R.P., see Yacout	220 (1984) 461
Garelick, D., see Nelson	216 (1983) 381
Garganne, P., see Veyssiére	212 (1983) 61
Garibaldi, J.L. and C.M. Logan, High speed rotating vacuum seal ( <i>Letter to the Editor</i> )	211 (1983) 213
Garret, R.F., R.J. MacDonald and D.J. O'Connor, Ion neutralisation in secondary ion mass spectrometry	218 (1983) 333
Garrett, J.W., see Boring	218 (1983) 707
Gärtner, K., K. Hehl and G. Schlotzhauer, Axial dechanneling. I. Perfect crystal	216 (1983) 275
Garvey, G.T., see Freedman	215 (1983) 71
Gary, J.W., see Aihara	217 (1983) 259
Gascon, J., see Häusser	213 (1983) 301
Gatti, E., A. Longoni and V. Radeka, An interpolating filter for centroid finding of induced charge in MWPCs with strip cathodes	220 (1984) 445
Gavron, A., see Van der Plicht	211 (1983) 403
Gayer, A. and S. Bukshpan, Study of the effect of scattered photons on attenuation coefficient measurements	220 (1984) 525
Gayler, J., see Albanese	212 (1983) 111
Gearhart, R.A., see Cox	219 (1984) 487
Gearhart, R.A., see Cox	219 (1984) 491
Gebauer, H.J., see Fent	211 (1983) 315
Gebauer, H.J., see Albanese	212 (1983) 111
Gebauer, H.J., see De Palma	216 (1983) 393
Gebauer, H.J., see De Palma	217 (1983) 135
Gehrels, N., see Paciesas	215 (1983) 261
Geissel, H., see Neidel	212 (1983) 299
Geissel, H., Y. Laichter, W.F.W. Schneider and P. Armbruster, Energy loss straggling of 1.4–10 MeV/u heavy ions in gases	215 (1983) 329
Geller, R., see Clegg	212 (1983) 5
Geller, R., see Delaunay	213 (1983) 165
Geller, R. et B. Jacquot, Production d'ions calcium dans la source d'ions multichargés ECR Minimafois	219 (1984) 1
Gelletly, W., The experimental tools to exploit the Daresbury nuclear structure facility	211 (1983) 89
Geltenbort, P., see Oed	219 (1984) 569
Gemmeke, H., see Krämer	220 (1984) 123
Genat, J.-F., see Baubillier	217 (1983) 205
Gentile, T., see Ehrlich	211 (1983) 17
Gentile, T., see Andrews	211 (1983) 47
Geretschläger, M., see Semrad	215 (1983) 549
Ghosh, P.K., see Bhattacharya	213 (1983) 553

- Giannatiempo, A., see Fazzini . . . . . 211 (1983) 125
- Gibbard, B.G., see Andrews . . . . . 211 (1983) 47
- Gibson, M.D., see Albrow . . . . . 214 (1983) 201
- Gibson, W.M., see Filatova . . . . . 211 (1983) 353
- Gibson, W.M., see Wang . . . . . 218 (1983) 669
- Gidekel, G., see Fazzini . . . . . 220 (1984) 144
- Gilbody, H.B., Collisions involving hydrogen atoms . . . . . 214 (1983) 109
- Gilchriese, M.G.D., see Andrews . . . . . 211 (1983) 47
- Gildemeister, O., see Bénichou . . . . . 217 (1983) 163
- Gill, D.R., see Sobie . . . . . 219 (1984) 501
- Gill, R.L., see Schmid . . . . . 211 (1983) 287
- Gillman, A.R., see Bailey . . . . . 213 (1983) 201
- Ginobbi, P., see Baroni . . . . . 214 (1983) 381
- Ginzburg, I.F., G.L. Kotkin, S.L. Panfil, V.G. Serbo and V.I. Telnov, Colliding  $\gamma e$  and  $\gamma\gamma$  beams based on single-pass  $e^+e^-$  accelerators. II. Polarization effects, monochromatization improvement . . . . . 219 (1984) 5
- Giorgi, M., see Azaiez . . . . . 211 (1983) 335
- Giorni, A., see Pastor . . . . . 212 (1983) 209
- Gippetto, C., A power modulator with a nonsaturated transformer switching device . . . . . 215 (1983) 203
- Girard, C., see Bénichou . . . . . 217 (1983) 163
- Girard, E., see Amsel . . . . . 218 (1983) 16
- Gits, S., Characterization of extended defects in  $\alpha$ -HgI<sub>2</sub> single crystals . . . . . 213 (1983) 43
- Gittelmann, B., see Andrews . . . . . 211 (1983) 47
- Glass, G., see Nelson . . . . . 216 (1983) 381
- Glass, G., see Hollas . . . . . 219 (1984) 275
- Glass, H., see Mangeot . . . . . 216 (1983) 79
- Glass, H., see Adams . . . . . 217 (1983) 237
- Glaubman, M., see Nelson . . . . . 216 (1983) 381
- Glavish, H.F., see Dunham . . . . . 219 (1984) 46
- Gleason, G., see Rhode . . . . . 219 (1984) 406
- Głowacka, L., M. Jaskóła, R. Sochacka, M. Wieluński and J. Dalmas, Thermal treatment of Si(SB) detectors (*Letter to the Editor*) . . . . . 216 (1983) 303
- Gnaser, H. and F.G. Rüdenauer, Evaluation of a liquid metal ion source for secondary ion mass spectrometry . . . . . 218 (1983) 303
- Gnaser, H., Oxygen-concentration dependent enhancement of positive secondary ion emission from silicon . . . . . 218 (1983) 312
- Gobbur, S.G., A channel profile analyser . . . . . 213 (1983) 349
- Gobin, R., see Faure . . . . . 219 (1984) 243
- Gobin, R., see Faure . . . . . 219 (1984) 449
- Godfrey, L., see Engelmann . . . . . 216 (1983) 45
- Goktepe, O.F., see Andreadis . . . . . 218 (1983) 747
- Goldberg, M., see Andrews . . . . . 211 (1983) 47
- Goldman, L., see Mikesell . . . . . 215 (1983) 561
- Goldschmidt, P., see Fazzini . . . . . 220 (1984) 144
- Golecki, I., Rutherford backscattering and channeling analysis of epitaxial, low-mass films on high-mass substrates . . . . . 218 (1983) 63
- Golovanivsky, K.S., see Dugar-Zhabon . . . . . 219 (1984) 263
- Golovatyuk, V.M., see Filatova . . . . . 211 (1983) 353
- Golovatyuk, V.M., see Filatova . . . . . 215 (1983) 135
- Golovkov, V.M., V.N. Zabaev, B.N. Kalinin, A.A. Kurkov, V.I. Lunev, Yu.N. Adishchev, A.P. Potylitsin and S.A. Vorobiev, Generation of photoneutrons by means of a channelled electron beam . . . . . 212 (1983) 167
- Golub, R. and A.D. Taylor, Slowing down of neutrons from a pulsed, point, monoenergetic source in a hydrogenous medium . . . . . 212 (1983) 349
- Gönnenwein, F., see Oed . . . . . 219 (1984) 569
- Gonzalez, H., see Perez Ferreira . . . . . 220 (1984) 37
- Gonzalez, H., see Fazzini . . . . . 220 (1984) 144
- Goodrick, M.J., see Albrow . . . . . 214 (1983) 201
- Goodwin, A., see Knöfel . . . . . 212 (1983) 387
- Gopala, K., see Sanjeeviah . . . . . 216 (1983) 231
- Gorbunov, P., see Abt . . . . . 217 (1983) 377
- Gordon, H., see Carosi . . . . . 219 (1984) 311
- Gordon, T. see Sandoval . . . . . 216 (1983) 171
- Gorn, W., see Aihara . . . . . 217 (1983) 259
- Gosman, D., see Daum . . . . . 217 (1983) 361

Gosselin, D., see Tadjine	213 (1983) 77
Gossett, C.R., Simultaneous high depth resolution profiling of carbon and oxygen	218 (1983) 149
Gössling, C., see Albanese	212 (1983) 111
Goswami, J.N., see Kukreja	219 (1984) 196
Gotow, K., see Hargrove	219 (1984) 461
Gott, Yu.V., A.N. Silaev, R.R. Chistyakov and V.A. Shurygin, A photoelectron spectrometer for measurement of electron plasma temperature	214 (1983) 463
Gottschalk, B., Simple serial data link ( <i>Letter to the Editor</i> )	213 (1983) 547
Gouanere, M., see Binon	214 (1983) 269
Goudsmit, P.F.A., see Beer	219 (1984) 322
Gould, C.R., see Dixon	213 (1983) 525
Grabez, B., R. Beckmann, P. Vater and R. Brandt, Identification of low energy ions in CR-39 plastic track detectors	211 (1983) 209
Graf, F., see Bauer	214 (1983) 189
Graf, H.J., see Drescher	216 (1983) 35
Gramegna, F., see Fabris	216 (1983) 167
Grande, M. and G.R. Moss, An optimised thin film wavelength shifting coating for Cherenkov detection	215 (1983) 539
Grannis, P.D., see Engelmann	216 (1983) 45
Gräwe, B., see Drescher	216 (1983) 35
Gray, R., see Adams	217 (1983) 237
Green, J., see Andrews	211 (1983) 47
Green Jr., R.E., see Bilello	215 (1983) 291
Greene, S.J., see Spinka	211 (1983) 239
Gregory, C., see Brisson	215 (1983) 79
Grelaud, B., see Dudelzak	217 (1983) 208
Griffiths, K., see MacDonald	218 (1983) 765
Grimm, H., On the resolution function of crystal spectrometers for neutron scattering	219 (1984) 553
Grindhammer, G., see Binder	217 (1983) 285
Grión, N., see Cernigoi	211 (1983) 129
Grishaev, I.A., see Filatova	211 (1983) 353
Grodzins, L., Intrinsic and effective sensitivities of analysis by X-ray fluorescence induced by protons, electrons, and photons	218 (1983) 203
Groeneveld, K.O., see Frischkorn	214 (1983) 123
Groening, H., K.J. Moody and G.T. Seaborg, On the use of isomer ratios in $^{44}\text{Sc}$ for predicting spin populations in high energy heavy-ion nuclear reactions	214 (1983) 317
Groleau, R., S.C. Gujrathi and J.P. Martin, Time-of-flight system for profiling recoiled light elements	218 (1983) 11
Groleau, R., see Moreau	218 (1983) 111
Groom, D.E., Silicon photodiode detection of bismuth germanate scintillation light	219 (1984) 141
Grossetete, B., see Baubillier	217 (1983) 205
Grosswendt, B., see Waibel	211 (1983) 487
Groves, J.L., see Chirovsky	219 (1984) 103
Grüb, R., B. Langeset, P. Maier and H. Schönbacher, Life performance of an EPR-insulated power cable exposed in service beyond 3 MGy in a high-level radiation area	214 (1983) 469
Grüebler, W. and P.A. Schmelzbach, Production of intense beams of polarized negative hydrogen ions by double charge exchange in alkali vapour	212 (1983) 1
Grüebler, W., see Elsener	219 (1984) 519
Gruen, D.M., see Pellin	218 (1983) 771
Gruhn, C.R., see Lindblad	215 (1983) 183
Grupen, C., see Bleichert	212 (1983) 145
Grusell, E., see Rikner	217 (1983) 501
Guaraldo, C., see Capitani	216 (1983) 307
Guarino, G., see McDonald	219 (1984) 508
Gubler, H.P., see Bracco	219 (1984) 329
Gubrienko, K.I., see Frolov	216 (1983) 93
Gueguen, J.P., see Dei-Cas	220 (1984) 165
Guigas, R., see Blüm	213 (1983) 251
Gujrathi, S.C., see Groleau	218 (1983) 11
Gul, K., see Khan	215 (1983) 193
Guldbakke, S. and H. Lesiecki, Fast protons in neutron calibration fields ( <i>Letter to the Editor</i> )	211 (1983) 559
Gundu Rao, K.S., see Sanjeeviah	216 (1983) 231
Gursky, J.C., see Reuter	220 (1984) 288



- Guzik, Z., see Filatova . . . . . 211 (1983) 353  
 Guzik, Z., see Filatova . . . . . 215 (1983) 135  
 Gwinn, D., see Fisher . . . . . 219 (1984) 179  
 Gygi, E., see Jonker . . . . . 215 (1983) 361  
 Gyles, W., see Sobie . . . . . 219 (1984) 501
- Haas, J., see Albanese . . . . . 212 (1983) 111  
 Haba, J., see Tanimori . . . . . 216 (1983) 57  
 Hacker, U., see Martin . . . . . 214 (1983) 281  
 Hadjeris, L., see Mine . . . . . 211 (1983) 561  
 Hadley, N.J., see Aihara . . . . . 217 (1983) 259  
 Haeberli, W., see Krämer . . . . . 220 (1984) 123  
 Hagedoorn, H.L., see Corsten . . . . . 212 (1983) 37  
 Hagedoorn, H.L., see Corsten . . . . . 212 (1983) 47  
 Hagedoorn, H.L., see Corsten . . . . . 216 (1983) 25  
 Haggerty, J., see Andrews . . . . . 211 (1983) 47  
 Haight, R.C., G.J. Mathews, R.M. White, L.A. Avilés and S.E. Woodard, A new system for astrophysical nuclear reaction studies with radioactive ion beams . . . . . 212 (1983) 245  
 Hailey, C.J., W.H.-M. Ku and M.H. Vartanian, An imaging gas scintillation proportional counter for use in X-ray astronomy . . . . . 213 (1983) 397  
 Halbach, K., see Martin . . . . . 214 (1983) 281  
 Haldeman, M., see Areti . . . . . 212 (1983) 135  
 Hale, G., see Cox . . . . . 219 (1984) 487  
 Hale, G., see Cox . . . . . 219 (1984) 491  
 Hall, G., Ionisation energy losses of highly relativistic charged particles in thin silicon layers . . . . . 220 (1984) 356  
 Halpern, H., see Spinka . . . . . 211 (1983) 239  
 Hameury, J.M., see Paciesas . . . . . 215 (1983) 261  
 Hamm, M.E., see Moss . . . . . 219 (1984) 558  
 Han, S.R., see Nelson . . . . . 216 (1983) 381  
 Hanawa, T., see Oura . . . . . 218 (1983) 253  
 Hance, R., see Areti . . . . . 212 (1983) 135  
 Hanlon, J., see Brisson . . . . . 215 (1983) 79  
 Hanna, S.S., see Dunham . . . . . 219 (1984) 46  
 Hantouche, C., La constitution de la densité d'échauffement d'un thermomètre gamma . . . . . 219 (1984) 394  
 Hara, K., see Abe . . . . . 220 (1984) 293  
 Harakeh, M.N., see Sujkowski . . . . . 219 (1984) 111  
 Hardt, A., see Martin . . . . . 214 (1983) 281  
 Hardwick, C., see Daum . . . . . 217 (1983) 361  
 Hargrove, C.K., H. Mes, A. Bennett, D.A. Bryman, M. Hasinoff, J.A. MacDonald, J.M. Poutissou, T. Numao, J. Spuller, G. Azuelos, R. Poutissou, M. Blecher, K. Gotow and A.L. Carter, The spatial resolution of the time projection chamber at TRIUMF . . . . . 219 (1984) 461  
 Harigel, G., C. Baltay and M. Hibbs, On the measurement of the momentum of 19 GeV/c electrons in a heavy liquid bubble chamber . . . . . 211 (1983) 343  
 Harigel, G., A. Herve and K. Winter, A giant argon bubble chamber with long sensitive time for nucleon decay experiments . . . . . 216 (1983) 355  
 Haring, A., see Haring, R.A. . . . . 211 (1983) 529  
 Haring, R.A., A. Haring, F.S. Klein, A.C. Kummel and A.E. De Vries, Reactive sputtering of simple condensed gases by keV heavy ion bombardment . . . . . 211 (1983) 529  
 Harper, R.W., see Bowman . . . . . 216 (1983) 399  
 Harris, M., see Carosi . . . . . 219 (1984) 311  
 Harrison, Jr., D.E., see Webb . . . . . 218 (1983) 697  
 Harrison, Jr., D.E. and R.P. Webb, The creation of surface damage by ion-beam bombardment . . . . . 218 (1983) 727  
 Hart, G., see Sandoval . . . . . 216 (1983) 171  
 Hart, J.C. and D.H. Saxon, Track and vertex fitting in an inhomogeneous magnetic field . . . . . 220 (1984) 309  
 Hart, V., see Bolton . . . . . 217 (1983) 173  
 Hartill, D.L., see Andrews . . . . . 211 (1983) 47  
 Hartjes, F., see Konijn . . . . . 217 (1983) 311  
 Hartner, G.F., D.E. Blodgett, S.B. Bracker, B.R. Kumar, G.J. Luste, J.F. Martin, W.J. Spaldin, K.K. Shahbazian, R.A. Sheperd, A.J. Stacey and C.J. Zorn, A recoil proton detector using cylindrical proportional chambers and scintillator counters . . . . . 216 (1983) 113  
 Harvey, J., see Kernel . . . . . 214 (1983) 273

- Hasell, D.K., see Bracco . . . . . 219 (1984) 329
- Hasemann, H., see Danilov . . . . . 217 (1983) 153
- Hasert, F.J., see Albanese . . . . . 212 (1983) 111
- Hashimoto, K., see Yamaguchi . . . . . 218 (1983) 598
- Hashimoto, Y., see Fujii . . . . . 215 (1983) 357
- Hasinoff, M., see Blüm . . . . . 213 (1983) 251
- Hasinoff, M., see Hargrove . . . . . 219 (1984) 461
- Hašková, B., see Mikula . . . . . 211 (1983) 519
- Hasuyama, H., Y. Kanda and Y. Wakuta, Evaluation of RF transition efficiency in an atomic-beam polarized deuteron source . . . . . 216 (1983) 525
- Hatanaka, K., see Nakamura . . . . . 212 (1983) 173
- Hatanaka, K., N. Matsuoka, H. Sakai, T. Saito, H. Tamura, K. Hosono, M. Kondo, K. Imai, H. Shimizu and K. Nisimura, Acceleration of protons and deuterons polarized in the horizontal plane by the RCNP cyclotron . . . . . 217 (1983) 397
- Hauptman, J.M., see Aihara . . . . . 217 (1983) 259
- Hausamman, R., see Aprile-Giboni . . . . . 215 (1983) 147
- Häuser, J., see Klein . . . . . 220 (1984) 200
- Häusser, O., M.A. Lone, T.K. Alexander, S.A. Kushneriuk and J. Gascon, The prompt response of bismuth germanate and NaI(Tl) scintillation detectors to fast neutrons . . . . . 213 (1983) 301
- Hautala, M., see Paltemaa . . . . . 218 (1983) 785
- Hautala, M., Computer simulations of slowing down of ions in polycrystalline materials . . . . . 218 (1983) 799
- Hauviller, C., see Bénichou . . . . . 217 (1983) 163
- Havenith, W., see Meyer . . . . . 215 (1983) 65
- Hayashi, K., see Arai . . . . . 214 (1983) 209
- Hayashide, Y., N. Kim, K. Kondo, S. Miyashita, H. Miyata, F. Sato, M. Yoshino, M. Mishina, F. Takasaki and M. Atac, Resistive plastic cathode for proportional chamber . . . . . 216 (1983) 127
- Hayashide, Y., M. Ito, N. Kim, K. Kondo, S. Miyashita, M. Shimura and M. Shibata, Limited streamer mode operation of extruded resistive cathode gas counter . . . . . 216 (1983) 135
- Hayashi, M., see Takiue . . . . . 219 (1984) 192
- Hayman, P., see Albanese . . . . . 212 (1983) 111
- Haymes, R., see Paciesas . . . . . 215 (1983) 261
- Haynes, W., see Areti . . . . . 212 (1983) 135
- He, C.F., see Wen . . . . . 219 (1984) 333
- Heck, B., see Aihara . . . . . 217 (1983) 259
- Heckman, H.H., see Bloomer . . . . . 215 (1983) 247
- Hedgecock, C.R., see Dietrich . . . . . 217 (1983) 160
- Hedges, R.E.M., Radiocarbon and other radionuclide measurements by accelerator mass spectrometry . . . . . 220 (1984) 211
- Hedin, D., see Engelmann . . . . . 216 (1983) 45
- Heer, E., see Aprile-Giboni . . . . . 215 (1983) 147
- Hegerath, A., see Suffert . . . . . 215 (1983) 107
- Hehl, K., see Gärtner . . . . . 216 (1983) 275
- Heijne, E.H.M., see Nelson . . . . . 215 (1983) 385
- Heil, R., see Drexler . . . . . 220 (1984) 409
- Hekman, W.E., see MacArthur . . . . . 218 (1983) 519
- Held, J., see Korschinek . . . . . 220 (1984) 82
- Helene, O., Upper limit of peak area . . . . . 212 (1983) 319
- Hemment, P.L.F., E.A. Maydell-Ondrusz and K.G. Stephens, Ion beam dosimetry by Rutherford backscattering with continuous rotation of the sample . . . . . 218 (1983) 103
- Hemment, P.L.F., see Kilner . . . . . 218 (1983) 573
- Hemmi, Y., see Adams . . . . . 217 (1983) 237
- Hempstead, M., see Andrews . . . . . 211 (1983) 47
- Heng, G., see Letournel . . . . . 220 (1984) 10
- Henne, M., see Stephan . . . . . 213 (1983) 411
- Henry, E.A., see Decman . . . . . 219 (1984) 523
- Henschel, H., see Neidel . . . . . 212 (1983) 299
- Heppelmann, S., see Chandlee . . . . . 215 (1983) 369
- Heppelmann, S., see Nelson . . . . . 216 (1983) 381
- Herley, P.J., see Bilello . . . . . 215 (1983) 291
- Herman, M.G., see Cormier . . . . . 212 (1983) 185
- Herold, W.-D., J. Egger, H. Kaspar and F. Pocar, Precision measurements of energy loss distributions in xenon using proportional scintillation in a wire chamber . . . . . 217 (1983) 277
- Herrup, D., see Andrews . . . . . 211 (1983) 47



Hertzberger, L., see Daum	217 (1983) 361
Hervé, A., see Benichou	214 (1983) 245
Herve, A., see Harigel	216 (1983) 355
Hervé, A., see Bénichou	217 (1983) 163
Herzlinger, M., see Andrews	211 (1983) 47
Herzog, G., see Thomas	211 (1983) 511
Hess, R., see Aprile-Giboni	215 (1983) 147
Hesselink, W.H.A., see Van Ruyven	216 (1983) 141
Heugel, J., see Letournel	220 (1984) 10
Heusch, C.A., see Breakstone	211 (1983) 73
Heusse, P., see Albanese	212 (1983) 111
Heusser, G., see Damjantschitsch	218 (1983) 129
Hibbs, M., see Harigel	211 (1983) 343
Hicks, R., see Andrews	211 (1983) 47
Hicks, R.G., see Ehrlich	211 (1983) 17
Hiddleston, J., see Albrow	214 (1983) 201
Hiebert, J.C., see Klages	219 (1984) 269
Hiebert, J.C., see Hollas	219 (1984) 275
Hiisimäki, P. and O. Antson, Estimation of peak intensities from frequency filtered total scattering data of neutrons obtained by the reverse Fourier method	219 (1984) 356
Hildingsson, L., see Elfström	214 (1983) 311
Hilgemeier, M., see Vlieks	213 (1983) 291
Hilger, E., see O'Neill	216 (1983) 361
Hilke, H.J., The PAD TPC: a TPC without sense wires	217 (1983) 189
Hilke, H.J., see Aihara	217 (1983) 259
Hilke, H.J., see Adam	217 (1983) 291
Hill, N.W., see Wender	220 (1984) 371
Hillery, P., see Bird	218 (1983) 53
Hirabayashi, H., see Kurokawa	212 (1983) 91
Hirabayashi, M., see Yamaguchi	218 (1983) 598
Hirai, H., see Kokame	213 (1983) 317
Hirasima, Y., see Yoshimori	215 (1983) 255
Hirata, J.H., see Koide	215 (1983) 61
Hirayama, H., see Perez-Mendez	217 (1983) 255
Hirayama, H., W.R. Nelson, A. Del Guerra, T. Mulera and V. Perez-Mendez, Monte Carlo studies for the design of a lead glass drift calorimeter	220 (1984) 327
Hmelo, A.B., see Bilello	215 (1983) 291
Hnatowicz, V., see Krištiak	211 (1983) 413
Hoath, S.D., see England	214 (1983) 305
Hoefert, M., see Stevenson	216 (1983) 99
Hoffman, C.M., see Sandoval	216 (1983) 171
Hofmann, D., A novel momentum-selective magnetic steering device for low energy electrons	211 (1983) 387
Hofmann, D., see Frischkorn	214 (1983) 123
Hofmann, H., see Adam	217 (1983) 291
Hofmann, W., see Drescher	216 (1983) 35
Hofmann, W., see Aihara	217 (1983) 259
Hofsäss, H., see Wichert	218 (1983) 633
Hogan, G.E., see Sandoval	216 (1983) 171
Holder, M., see Büngener	214 (1983) 261
Holder, M., see Büngener	217 (1983) 254
Holland, L., see Biederman	212 (1983) 497
Hollas, C.L., R.D. Ransome, P.J. Riley, B.E. Bonner, J.G. Boissevain, T.S. Bhatia, G. Glass, J.C. Hiebert and W.B. Tippens, QPAN – a quick polarization analyzer for neutrons	219 (1984) 275
Hollos, G., R. Kaim, Y. Shachar and Y. Yurman, Recent developments at the Rehovot 14UD pelletron	220 (1984) 140
Holt, R.S. and M.J. Cooper, Magnetic Compton scattering with circularly polarised synchrotron radiation	213 (1983) 447
Holzmann, R., see Kuzminski	217 (1983) 449
Hoogenboom, A.M., see Van der Borg	220 (1984) 115
Hoogland, W., see Daum	217 (1983) 361
Hoover, R.A., see Evans	219 (1984) 233
Hopkinson, G.R., Charge diffusion effects in CCD X-ray detectors, I. Theory	216 (1983) 423
Hopkinson, G.R., see Lumb	216 (1983) 431

- Horiuchi, N., A simplified method for cross correlation power spectrum analysis . . . . . 211 (1983) 433
- Horiuchi, N., A tritium monitoring system using the coherent demodulation technique . . . . . 217 (1983) 479
- Horrabin, C.W., see Beech . . . . . 220 (1984) 170
- Horsdal-Pedersen, E., Probabilities for K-shell ionization and capture by light ions: scaling properties . . . . . 214 (1983) 65
- Horwitz, N., see Andrews . . . . . 211 (1983) 47
- Hoshino, S., see Niimura . . . . . 211 (1983) 203
- Hosono, K., see Hatanaka . . . . . 217 (1983) 397
- Houdayer, A.J., see Lessard . . . . . 216 (1983) 241
- Howe, L.M., see Swanson . . . . . 218 (1983) 613
- Howe, L.M., see Swanson . . . . . 218 (1983) 643
- Howe, L.M., M.L. Swanson and A.F. Quenneville, The creation and annihilation of vacancy–solute complexes during irradiation of Ni(In) and Ni(Au) crystals . . . . . 218 (1983) 663
- Howells, W.S., A deconvolution procedure for liquid structure determination . . . . . 219 (1984) 543
- Hrisoho, A. and G. Waysand, Instrumental limit and number of effective granules in superheated superconducting detectors . . . . . 214 (1983) 415
- Hsiung, Y., see Adams . . . . . 217 (1983) 237
- Huang-Xuan, T., see Mine . . . . . 211 (1983) 561
- Hubbard, J.R., see Mangeot . . . . . 216 (1983) 79
- Hubbard, J.R., see Adams . . . . . 217 (1983) 237
- Hubbeling, L., see Belau . . . . . 214 (1983) 253
- Huber, K., see Drexler . . . . . 220 (1984) 409
- Huber, P., see Semrad . . . . . 218 (1983) 811
- Hudson, E.D., see Jones . . . . . 220 (1984) 1
- Hughes, E.B., see O'Neill . . . . . 216 (1983) 361
- Hughes, S., see Dalglish . . . . . 215 (1983) 9
- Hughes-Jones, R.E., see Bussey . . . . . 211 (1983) 301
- Hull, K., see Beyerle . . . . . 213 (1983) 107
- Hull, K., see Szymczyk . . . . . 213 (1983) 115
- Hunyadi, I., Á.Z. Kiss, I. Kiss, E. Koltay and Gy. Szabó, Charge state distribution of light heavy ions accelerated in a single ended Van de Graaff accelerator . . . . . 220 (1984) 154
- Hurlbut, C.R., see Knickelbein . . . . . 216 (1983) 121
- Hürlimann, W., see Martin . . . . . 214 (1983) 281
- Huston, J., see Chandlee . . . . . 215 (1983) 369
- Huth, G.C., see Szymczyk . . . . . 213 (1983) 115
- Huth, G.C., see Iwanczyk . . . . . 213 (1983) 123
- Huth, J.E., see Aihara . . . . . 217 (1983) 259
- Hutson, J., see Nelson . . . . . 216 (1983) 381
- Huttel, E., see Baumgart . . . . . 215 (1983) 319
- Huyse, M., Ionization in a hot cavity . . . . . 215 (1983) 1
- Hylen, J., see Aihara . . . . . 217 (1983) 259
- Iannuzzi, M., see Allocca . . . . . 219 (1984) 227
- Iarocci, E., Plastic streamer tubes and their applications in high energy physics . . . . . 217 (1983) 30
- Iarocci, E., see Battistoni . . . . . 217 (1983) 429
- Iarocci, E., see Battistoni . . . . . 217 (1983) 433
- Iarocci, E., see Battistoni . . . . . 219 (1984) 300
- Iga, Y., T. Wada, Y. Yamashita and I. Yamamoto, Energy loss measurements for charged particles and a new approach based on the experimental results . . . . . 213 (1983) 531
- Iida, T., S. Yamamoto, Y. Ikebe, A. Seki, K. Nakata, M. Ebana, M. Kanamori and M. Yoshida, An alpha-particle imaging system for detecting plutonium contamination . . . . . 212 (1983) 413
- Ikebe, Y., see Iida . . . . . 212 (1983) 413
- Ikegami, H., see Sugiyama . . . . . 215 (1983) 17
- Ikegami, H., see Fujita . . . . . 217 (1983) 441
- Ikegami, H., see Koori . . . . . 220 (1984) 453
- Ikegami, K., see Mori . . . . . 220 (1984) 264
- Ikuchi, N., see Tomita . . . . . 213 (1983) 469
- Imai, K., see Spinka . . . . . 211 (1983) 239
- Imai, K., see Hatanaka . . . . . 217 (1983) 397
- Imanishi, A., see Kokame . . . . . 213 (1983) 317
- Imlay, R., see Andrews . . . . . 211 (1983) 47
- Inaba, S., see Arai . . . . . 214 (1983) 209

- Inada, T., see Kanai . . . . . 214 (1983) 491
- Inada, T., K. Kishi, S. Miyagi and H. Kakinuma, Rutherford backscattering analysis of silicide formation in Mo-Si structures by ion implantation . . . . . 218 (1983) 567
- Inada, T., H. Miyakawa, T. Ohfuji, K. Benzaki, H. Onoda, Y. Yuge and S. Ushio, MeV backscattering analysis of annealing behaviors of ion-implanted arsenic in silicon . . . . . 218 (1983) 607
- Ing, H., R.C. McCall, T.M. Jenkins and G.J. Warren, Identification of neutrons from the cooling water of a GeV electron accelerator . . . . . 219 (1984) 41
- Ingwersen, H., E. Jaeschke and R. Repnow, Deceleration of highly stripped ions by the Heidelberg post-accelerator . . . . . 215 (1983) 55
- Inoue, K., On the 20 K methane moderator and its applicability to an intense pulsed cold neutron source (*Letter to the Editor*) . . . . . 216 (1983) 537
- Inyakin, A.V., D.B. Kakauridze, A.A. Lednev, Yu.D. Prokoshkin and A.V. Singovsky, Characteristics of lead-glass  $\gamma$ -spectrometer radiators irradiated by high energy particles . . . . . 215 (1983) 103
- Isenbügel, R., see Treichel . . . . . 212 (1983) 101
- Ishibashi, A., see Némethy . . . . . 212 (1983) 273
- Ishida, N., see Kokame . . . . . 213 (1983) 317
- Ishihara, M., see Asahi . . . . . 220 (1984) 389
- Ishihara, N., see Arai . . . . . 214 (1983) 209
- Ishihara, N., see Arai . . . . . 217 (1983) 181
- Ishikawa, H., see Takiue . . . . . 219 (1984) 192
- Ishitani, T., K. Umemura and H. Tamura, Mass-separated microbeam system with a liquid-metal ion source . . . . . 218 (1983) 363
- Ishizawa, U., see Aono . . . . . 218 (1983) 241
- Iskakov, A.N., see Filatova . . . . . 211 (1983) 353
- Iskakov, A.N., see Filatova . . . . . 215 (1983) 135
- Isoya, A., see Korschinek . . . . . 220 (1984) 82
- Isoyama, G., see Asaoka . . . . . 215 (1983) 493
- Israel, M.H., see Binns . . . . . 216 (1983) 475
- Ito, A., see Adams . . . . . 217 (1983) 237
- Ito, M., see Hayashide . . . . . 216 (1983) 135
- Ito, M., see Orito . . . . . 216 (1983) 439
- Ivanchenko, I.M., see Filatova . . . . . 211 (1983) 353
- Ivanov, A.B., see Abdushukurov . . . . . 217 (1983) 101
- Ivanov, I.Ts., see Exnerova . . . . . 217 (1983) 425
- Ivanov, M.P., see Sokol . . . . . 219 (1984) 336
- Ivanov, R.M., see Vankov . . . . . 214 (1983) 395
- Iwai, T., see Takagi . . . . . 215 (1983) 207
- Iwanczyk, J.S., see Dabrowski . . . . . 213 (1983) 89
- Iwanczyk, J.S., see Szymczyk . . . . . 213 (1983) 115
- Iwasaki, H., see Aihara . . . . . 217 (1983) 259
- Iwata, Y., see Yoshizawa . . . . . 212 (1983) 249
- Iwata, Y., see Jin . . . . . 212 (1983) 259
- Iwata, Y., M. Yasuhara, K. Maeda and Y. Yoshizawa, Precision measurements of gamma-ray intensities, VI.  $^{120}\text{Sb}$ ,  $^{124}\text{Sb}$  and  $^{125}\text{Sb}$  . . . . . 219 (1984) 123
- Izen, J.M., see Andrews . . . . . 211 (1983) 47
- Jabbour, J., see Louvel . . . . . 211 (1983) 535
- Jackman, T.E., see Davies . . . . . 218 (1983) 141
- Jackman, T.E., see Cohen . . . . . 218 (1983) 147
- Jackman, T.E., see Williams . . . . . 218 (1983) 299
- Jackman, T.E., see MacDonald . . . . . 218 (1983) 765
- Jackson, D.P., see Buck . . . . . 218 (1983) 257
- Jacobs, D.A., see Anders . . . . . 215 (1983) 377
- Jacobs, E.L., S.D. Bonaparte and P.D. Thacher, An arsenic-activation detector for bursts of 2.5 and 14 MeV neutrons . . . . . 213 (1983) 387
- Jacquot, B., see Delaunay . . . . . 213 (1983) 165
- Jacquot, B., see Geller . . . . . 219 (1984) 1
- Jacquot, C., see Clegg . . . . . 212 (1983) 5
- Jaeschke, E., see Ingwersen . . . . . 215 (1983) 55
- Jaffe, D., see Adams . . . . . 217 (1983) 237
- Jaffe, D.E., see Engelmann . . . . . 216 (1983) 45
- Jaffré, M., see Albanese . . . . . 212 (1983) 111



- Jäger, H., see Lieder . . . . . 220 (1984) 363
- Jaklevic, J.M., N.W. Madden and C.E. Wiegand, A precision beta gauge using a plastic scintillator and photomultiplier detector . . . . . 214 (1983) 517
- Jakob, H., see Rohrer . . . . . 220 (1984) 161
- James, A.N., P.A. Butler, T.P. Morrison, J. Simpson and K.A. Connell, The response of an isobutane filled ion chamber to heavy ions . . . . . 212 (1983) 545
- James, A.N., Large diameter melting by sparks . . . . . 220 (1984) 96
- James, F., Fitting tracks in wire chambers using the Chebyshev norm instead of least squares . . . . . 211 (1983) 145
- Jamil, K., see Khan . . . . . 215 (1983) 193
- Janata, F., see Albanese . . . . . 212 (1983) 111
- Jancso, G., see Albanese . . . . . 212 (1983) 111
- Jankowski, D., see Fields . . . . . 215 (1983) 113
- Jänsch, H., see Krämer . . . . . 220 (1984) 123
- Jarmer, J.J., see Spinka . . . . . 211 (1983) 239
- Jarron, P., see Nelson . . . . . 215 (1983) 385
- Järvinen, M.-L. and H. Sipilä, Average ionization energies of gas mixtures for X-rays . . . . . 217 (1983) 282
- Järvinen, M.-L., see Sipilä . . . . . 217 (1983) 298
- Jaskóła, M., see Głowacka . . . . . 216 (1983) 303
- Jauman, W., see Böttcher . . . . . 219 (1984) 369
- Jeanjean, J., see Mine . . . . . 211 (1983) 561
- Jeanjean, J., see Ahmad . . . . . 217 (1983) 169
- Jeanjean, M., see Ahmad . . . . . 217 (1983) 169
- Jeanney, C., see Aurouet . . . . . 211 (1983) 309
- Jeavons, A.P., see Tedeschi . . . . . 214 (1983) 509
- Jech, A., see Perez Ferreira . . . . . 220 (1984) 37
- Jelen, K., see Dwurażny . . . . . 217 (1983) 301
- Jelev, V.G., see Mandjukov . . . . . 213 (1983) 477
- Jenkins, T.M., see Nelson . . . . . 215 (1983) 385
- Jenkins, T.M., see Ing . . . . . 219 (1984) 41
- Jensen, D.H., see Evans . . . . . 219 (1984) 233
- Jensen, G.L., see Dixon . . . . . 213 (1983) 525
- Jensen, G.L., D.R. Dixon, K. Bruening and J. Bart Czirr, A moderating  $^6\text{Li}$ -glass neutron detector . . . . . 220 (1984) 406
- Jensen, T., see Chandlee . . . . . 215 (1983) 369
- Jensen, T., see Nelson . . . . . 216 (1983) 381
- Jerrestam, D., see Elfström . . . . . 214 (1983) 311
- Jesus, A.P., I.R. Pimentel and J.S. Lopes, The binding effect in alpha- and deuteron-induced L-shell X-ray production in the  $Z = 32\text{--}47$  region . . . . . 214 (1983) 29
- Jiang Bin-Yao, P. Tanguy et Xia Jin-Zhi, Equation d'enveloppe pour un faisceau accéléré par un champ électrostatique à symétrie de révolution . . . . . 213 (1983) 179
- Jibaly, M., see Andrews . . . . . 211 (1983) 47
- Jimenez, M., see Jonker . . . . . 215 (1983) 361
- Jiménez-Domínguez, H., A. Cabral-Prieto, H. Flores-Llamas, S. Galindo and F.J. Ramírez-Jiménez, An inexpensive method to increase the counting rate of a  $^{57}\text{Co}$  Mössbauer spectrometer (*Letter to the Editor*) . . . . . 219 (1984) 256
- Jin, J., J. Takada, Y. Iwata and Y. Yoshizawa, Precision measurements of gamma-ray intensities. V.  $^{160}\text{Tb}$ ,  $^{168}\text{Tm}$  and  $^{182}\text{Ta}$  . . . . . 212 (1983) 259
- Jipa, A., see Stoica . . . . . 219 (1984) 447
- Johansen, A., E. Johnson, L. Sarholt-Kristensen and S.M. Abdali, Self sputtering on cobalt single crystals . . . . . 218 (1983) 737
- Johansson, K.E., see Benichou . . . . . 214 (1983) 245
- Johansson, K.E., see Anders . . . . . 215 (1983) 377
- Johansson, T., see Breskin . . . . . 217 (1983) 131
- Johnson, A.S., see Albanese . . . . . 212 (1983) 111
- Johnson, B.M., Measurements of charge change in atomic collisions at MeV energies . . . . . 214 (1983) 73
- Johnson, E., see Johansen . . . . . 218 (1983) 737
- Johnson, K.J., see Barbaro-Galtieri . . . . . 213 (1983) 223
- Johnson, M.W., see Reuter . . . . . 220 (1984) 288
- Johnson, P.D. and N.V. Smith, Production of circularly polarized light from synchrotron radiation in the vacuum ultraviolet region . . . . . 214 (1983) 505
- Johnson, R.E., see Boring . . . . . 218 (1983) 707
- Johnson, R.R., see Sobie . . . . . 219 (1984) 501
- Johnstone, W.T., see Beech . . . . . 220 (1984) 170
- Jonckheere, A., see Chandlee . . . . . 215 (1983) 369

- Jonckheere, A., see Nelson . . . . . 216 (1983) 381  
 Jonckheere, A., see Adams . . . . . 217 (1983) 237  
 Jones, C.M., G.D. Alton, J.B. Ball, J.A. Benjamin, J.A. Biggerstaff, K.A. Erb, E.D. Hudson, R.C. Juras, P.K. Kloeppel, R.S. Lord, C.A. Ludemann, J.E. Mann, J.A. Martin, S.W. Mosko, E.G. Richardson, R.O. Sayer and N.F. Ziegler, Status report on the Holifield Heavy Ion Research Facility . . . . . 220 (1984) 1  
 Jones, R.T., see Lone . . . . . 214 (1983) 333  
 Jonker, M., F. Udo, U. Amaldi, R. Donnet, W. Flegel, B. Friend, E. Gygi, M. Jimenez, A. King, F. Schneider, A.M. Wetherell, J. Aspiazu, F. Niebergall, J. Schütt, F. Ferroni, D. De Pedis and V. Valente, The limited streamer tube system of the CHARM collaboration . . . . . 215 (1983) 361  
 Jorch, H.H. and R.D. Werner, In situ Rutherford backscattering measurements of ion-beam-induced atomic mixing . . . . . 218 (1983) 703  
 Joseph, C., see Antille . . . . . 217 (1983) 327  
 Jostlein, H., see Engelmann . . . . . 216 (1983) 45  
 Jöstlein, H., see Adams . . . . . 217 (1983) 237  
 Jouy, P., see Dei-Cas . . . . . 220 (1984) 165  
 Joy, T., see Aitken . . . . . 220 (1984) 149  
 Joyce, J.R., see Sanni . . . . . 216 (1983) 497  
 Joyce, T., see Chandlee . . . . . 215 (1983) 369  
 Judge, S.M., see Christmas . . . . . 215 (1983) 397  
 Jull, A.J.T., see Donahue . . . . . 218 (1983) 425  
 Jull, A.J.T., D.J. Donahue and T.H. Zabel, Target preparation for radiocarbon dating by tandem accelerator mass spectrometry . . . . . 218 (1983) 509  
 Jullian, S., see Dudelzak . . . . . 217 (1983) 208  
 Juras, R.C., see Jones . . . . . 220 (1984) 1  
 Jury, J.W., see Lambert . . . . . 214 (1983) 349
- Kabuss, E.M., see Albanese . . . . . 212 (1983) 111  
 Kachanov, V.A., see Binon . . . . . 214 (1983) 269  
 Kadota, K., see Takagi . . . . . 213 (1983) 539  
 Kadyrov, R.B., see Filatova . . . . . 211 (1983) 353  
 Kadyrov, R.V., see Filatova . . . . . 215 (1983) 135  
 Kafka, T., see Engelmann . . . . . 216 (1983) 45  
 Kagan, H., see Andrews . . . . . 211 (1983) 47  
 Kageyama, T., see Fujii . . . . . 215 (1983) 357  
 Kageyama, T., see Tanimori . . . . . 216 (1983) 57  
 Kahl, T., see Albanese . . . . . 212 (1983) 111  
 Kahn, B., Zuoyuan Wang and E. Sensintaffar, Contribution of plated-out  $^{218}\text{Po}$  and  $^{214}\text{Po}$  to measurements of airborne  $^{222}\text{Rn}$  and daughters with plastic (CR-39) nuclear track detectors . . . . . 219 (1984) 419  
 Kaim, R., see Hollos . . . . . 220 (1984) 140  
 Kajarekar, P.J., see Kukreja . . . . . 219 (1984) 196  
 Kajfasz, E., see D'Agostini . . . . . 219 (1984) 495  
 Kakauridze, D.B., see Inyakin . . . . . 215 (1983) 103  
 Kakinuma, H., see Inada . . . . . 218 (1983) 567  
 Kalantar, A.H., Effect of Poisson weighting on decay parameters: numerical results as noise level is increased (Letter to the Editor) . . . . . 211 (1983) 555  
 Kalbach, R., see De Marzo . . . . . 217 (1983) 405  
 Kalbitzer, S., see Damjantschitsch . . . . . 218 (1983) 129  
 Kalbitzer, S., see Frech . . . . . 218 (1983) 500  
 Kaldis, E., see Muheim . . . . . 213 (1983) 39  
 Kalinin, B.N., see Golovkov . . . . . 212 (1983) 167  
 Kalish, R. and G. Bahir, PIXE analysis of compound materials . . . . . 218 (1983) 415  
 Kalt, L., see Brisson . . . . . 215 (1983) 79  
 Kalvius, G.M., see Obenhuber . . . . . 214 (1983) 361  
 Kamae, T., see Aihara . . . . . 217 (1983) 259  
 Kamakura, K., see Kokame . . . . . 213 (1983) 317  
 Kamaratos, E., Developments regarding the Bragg rule for stopping power and critical examination of its application to water . . . . . 215 (1983) 337  
 Kamenov, P.S., see Vapirev . . . . . 219 (1984) 376  
 Kamermans, R., see Van Engelen . . . . . 219 (1984) 529  
 Kamishita, I., see Minemura . . . . . 219 (1984) 472  
 Kamitsubo, H., see Asahi . . . . . 220 (1984) 389

- Kamon, T., K. Kondo, A. Yamashita, T. Shimizu and L. Nodulman, A new scintillator and wavelength shifter . . . . . 213 (1983) 261
- Kanai, T., K. Kawachi, H. Matsuzawa and T. Inada, Three-dimensional beam scanning for proton therapy . . . . . 214 (1983) 491
- Kanamori, M., see Iida . . . . . 212 (1983) 413
- Kanda, K., see Fujine . . . . . 215 (1983) 277
- Kanda, Y., see Tsubone . . . . . 215 (1983) 171
- Kanda, Y., see Hasuyama . . . . . 216 (1983) 525
- Kandaswamy, J., see Andrews . . . . . 211 (1983) 47
- Kaneko, H., see Yamaguchi . . . . . 218 (1983) 598
- Kaneko, Y., see Takagi . . . . . 215 (1983) 207
- Kankeleit, E., see Dahlinger . . . . . 219 (1984) 513
- Kantele, J., see Trzaska . . . . . 212 (1983) 221
- Kantele, J., see Decman . . . . . 219 (1984) 523
- Kaplan, D., see Adams . . . . . 217 (1983) 237
- Käppeler, F., see Wisshak . . . . . 219 (1984) 136
- Kapustinsky, J.S., see Sondheim . . . . . 219 (1984) 97
- Karabadzhak, G.F., V.D. Peskov and E.R. Podolyak, Coordinate gas counters with superhigh energy resolution for plasma diagnostics . . . . . 217 (1983) 56
- Karant, Y.J., see Bloomer . . . . . 215 (1983) 247
- Karban, O., see Krämer . . . . . 220 (1984) 123
- Karpenko, N.N., see Filatova . . . . . 211 (1983) 353
- Kaspar, H., see Herold . . . . . 217 (1983) 277
- Kasper, P., see Bjelkhagen . . . . . 220 (1984) 300
- Kass, R., see Andrews . . . . . 211 (1983) 47
- Katayama, I., see Koori . . . . . 220 (1984) 453
- Katcoff, S., see Mirzadeh . . . . . 216 (1983) 149
- Katkov, V.P. and A.I. Krupman, Effect of charge carrier collection on the shape of the amplitude spectrum of coaxial Ge(Li) detectors . . . . . 212 (1983) 327
- Kato, S., see Nakamura . . . . . 212 (1983) 173
- Katoh, T., see Yoshizawa . . . . . 212 (1983) 249
- Katsanevas, S., see Areti . . . . . 212 (1983) 135
- Kaufmann, R., G. Linker and O. Meyer, Application of the channeling and X-ray diffraction techniques for defect analysis . . . . . 218 (1983) 647
- Kawachi, K., see Kanai . . . . . 214 (1983) 491
- Kawada, Y., see Yoshizawa . . . . . 212 (1983) 249
- Kawai, H., see Tanimori . . . . . 216 (1983) 57
- Kawamura, K., see Koori . . . . . 220 (1984) 453
- Kawanishi, M., see Ohkuma . . . . . 211 (1983) 547
- Keen, J.M., see Earwaker . . . . . 218 (1983) 481
- Keinonen, J., A. Luukkainen, A. Anttila and M. Erola, Local density change of a metal backing due to implanted ions: effect on nuclear lifetimes obtained with the DSA method . . . . . 216 (1983) 249
- Keizer, P.H.M., see Postma . . . . . 219 (1984) 292
- Keller, L., see Nissenbaum . . . . . 213 (1983) 27
- Kellner, G., see Albanese . . . . . 212 (1983) 111
- Kemmer, J., see Belau . . . . . 214 (1983) 253
- Kemmer, J., see Belau . . . . . 217 (1983) 224
- Kennett, T.J., W.V. Prestwich, R.J. Tervo and J.S. Tsai, Evaluation of a method for the determination of accurate transition energies in the (n,  $\gamma$ ) reaction . . . . . 215 (1983) 159
- Kennett, T.J., see Tervo . . . . . 216 (1983) 205
- Kenney, R.W., see Aihara . . . . . 217 (1983) 259
- Kephart, R., see Minemura . . . . . 219 (1984) 472
- Kerek, A., see Blüm . . . . . 213 (1983) 251
- Kernel, G., P. Križan, M. Mikuž, A. Stanovnik, D. Zavrtanik, C.Engster, E.G. Michaelis, A.G. Zephat, J. Harvey and K.O.H. Ziock, A trigger system using wire chamber information . . . . . 214 (1983) 273
- Kernel, G., see Starič . . . . . 216 (1983) 67
- Kerns, C., see Areti . . . . . 212 (1983) 135
- Kerth, L.T., see Aihara . . . . . 217 (1983) 259
- Kess, K.H., see Van Driel . . . . . 215 (1983) 113
- Kesseler, G., see Carosi . . . . . 219 (1984) 311
- Kettle, P.-R., see Eaton . . . . . 219 (1984) 34
- Khaliquzzaman, M., S.T. Lam, D.M. Sheppard and L.G. Stephens-Newsham, Dependence of X-ray yields on different parameters for light element matrices in thick target PIXE and use of standards for calibration in



- such analysis . . . . . 216 (1983) 481
- Khan, H.A., see Khan, N.A. . . . . 215 (1983) 193
- Khan, H.A. and N.A. Khan, Charges produced by high doses of light charged particles in registration properties of mica track detectors . . . . . 216 (1983) 471
- Khan, H.A., Determination of critical angles of etching and track registration efficiencies of track detectors . . . 220 (1984) 540
- Khan, N.A., H.A. Khan, M. Ahmad, K. Jamil, M. Anwar, S.M. Saleem and K. Gul, Calibration of Homalite CR-39 plastic track detector for light particle spectrometry and its application in studying the (n,  $\alpha$ ) and (n, p) reaction on  $^{51}\text{V}$  . . . . . 215 (1983) 193
- Khan, N.A., see Khan, H.A. . . . . 216 (1983) 471
- Kharin, A.M., see Barabash . . . . . 211 (1983) 331
- Khrstov, V., see Exnerova . . . . . 217 (1983) 425
- Kikutani, E., see Kurokawa . . . . . 212 (1983) 91
- Kilner, J.A., see Tannhauser . . . . . 218 (1983) 504
- Kilner, J.A., S.D. Littlewood, P.L.F. Hemment, E. Maydell-Ondrusz and K.G. Stephens, SIMS analysis of silicon on insulator structures formed by high-dose  $\text{O}^+$  implantation into silicon . . . . . 218 (1983) 573
- Kim, I.-J., see Filatova . . . . . 211 (1983) 353
- Kim, I.J., see Wang . . . . . 218 (1983) 669
- Kim, K., see Milstein . . . . . 213 (1983) 65
- Kim, K.J., A synchrotron radiation source with arbitrarily adjustable elliptical polarization . . . . . 219 (1984) 425
- Kim, N., see Hayashide . . . . . 216 (1983) 127
- Kim, N., see Hayashide . . . . . 216 (1983) 135
- Kim, P., see Danilov . . . . . 217 (1983) 153
- Kimock, F.M., J.P. Baxter and N. Winograd, Detection of sputtered neutrals by multi-photon resonance ionization . . . . . 218 (1983) 287
- Kimura, K., Particle identification through the measurement of the Bragg curve centroid . . . . . 212 (1983) 227
- Kimura, M., see Takagi . . . . . 215 (1983) 207
- King, A., see Jonker . . . . . 215 (1983) 361
- King, A., see Bénichou . . . . . 217 (1983) 163
- King, B.V. and I.S.T. Tsong, The influence of atomic mixing on SIMS depth profiling of thin buried layers . . . 218 (1983) 687
- King, B.V., see Ziv . . . . . 218 (1983) 742
- Kirz, J., see Mangeot . . . . . 216 (1983) 79
- Kirz, J., see Adams . . . . . 217 (1983) 237
- Kiselev, Yu.F., V.V. Polyakov, A.I. Kovalev, E.I. Bunyatova, N.S. Borisov, V.Yu. Trautman, K. Werner and N.G. Kozlenko, A medium size polarised deuteron target . . . . . 220 (1984) 399
- Kishi, K., see Inada . . . . . 218 (1983) 567
- Kisielewicz, M., Measurements and calculation of low-energy heavy ion profiles in silicon . . . . . 216 (1983) 511
- Kiss, Á.Z., E. Koltay, Gy. Szabó and J. Félserfalvi, Optical behaviour of acceleration tubes studied in bremsstrahlung measurements . . . . . 212 (1983) 81
- Kiss, Á.Z., see Hunyadi . . . . . 220 (1984) 154
- Kiss, I., see Hunyadi . . . . . 220 (1984) 154
- Klages, H.O., H. Dobiasch, P. Doll, H. Krupp, M. Oexner, P. Plischke, B. Zeitnitz, F.P. Brady and J.C. Hiebert, POLKA – a polarized continuous energy neutron beam source at the Karlsruhe cyclotron . . . . . 219 (1984) 269
- Klanner, R., see Belau . . . . . 214 (1983) 253
- Klanner, R., see Belau . . . . . 217 (1983) 224
- Klarmann, J., see Binns . . . . . 216 (1983) 475
- Klein, F.S., see Haring . . . . . 211 (1983) 529
- Klein, H., A. Schempp, J. Häuser, E. Müller, W. Rohrbach, D. Walther, T. Weis, K. Bethge, H. Baumann and K. Meinel, Upgrading of the single ended 7 MV Van de Graaff accelerator in Frankfurt . . . . . 220 (1984) 200
- Klein, J., see Middleton . . . . . 218 (1983) 430
- Klewe-Nebenius, H., see Faust . . . . . 213 (1983) 277
- Klimanova, M., see Zrellov . . . . . 215 (1983) 141
- Kline, R., see Andrews . . . . . 211 (1983) 47
- Kloeppe, P.K., see Jones . . . . . 220 (1984) 1
- Kluge, W., see Dörfel . . . . . 214 (1983) 435
- Knapp, J.A. and D.M. Follstaedt, Ion channeling and TEM studies of pulse melted Fe(Pd) alloys . . . . . 218 (1983) 542
- Knauf, R., see Nölscher . . . . . 218 (1983) 116
- Knecht, L., see Beer . . . . . 219 (1984) 322
- Kneissl, U., see Drexler . . . . . 220 (1984) 409
- Knickelbein, M.B., J.W. Root and C.R. Hurlbut, A plastic scintillation counter for applications in radio-gas-chromatography . . . . . 216 (1983) 121
- Knoester, J., see Arciszewski . . . . . 215 (1983) 225

- Knöfel, T.M.J., J.J.S. Estrada, O.A.P. Tavares, J.B. Martins and A. Goodwin, Response characteristics of cellulose nitrate track-detectors to radon and radon-daughter mixtures . . . . . 212 (1983) 387
- Knorr, J., see Dörschel . . . . . 216 (1983) 227
- Knudson, A.R. and A.B. Campbell, Investigation of soft upsets in integrated circuit memories and charge collection in semiconductor test structures by the use of an ion microbeam . . . . . 218 (1983) 625
- Knudson, J.M., see Madey . . . . . 214 (1983) 401
- Knystautas, E.J., see Moreau . . . . . 218 (1983) 111
- Koba, K., see Kokame . . . . . 213 (1983) 317
- Kobayashi, M., see Tanimori . . . . . 216 (1983) 57
- Kobayashi, N., see Takagi . . . . . 215 (1983) 207
- Kobayashi, S., see Nakamura . . . . . 212 (1983) 173
- Kobayashi, T., see Muheim . . . . . 213 (1983) 39
- Kobayashi, T., see Orito . . . . . 215 (1983) 93
- Kobayashi, T., see Orito . . . . . 216 (1983) 439
- Koch, H., see Blüm . . . . . 213 (1983) 251
- Kocimski, S.M., see Close . . . . . 220 (1984) 531
- Koda, R., see Aihara . . . . . 217 (1983) 259
- Koebel, J.M., see Tadjine . . . . . 213 (1983) 77
- Koehler, P., see Chandlee . . . . . 215 (1983) 369
- Koehler, P., see Nelson . . . . . 216 (1983) 381
- Koeleman, B.J.J., S.T. De Zwart, A.L.Boers, B. Poelsema and L.K. Verhey, Adsorption study of hydrogen on a stepped Pt (997) surface using low energy recoil scattering . . . . . 218 (1983) 225
- Koenig, I., see Krämer . . . . . 220 (1984) 123
- Kofler, R.R., see Aihara . . . . . 217 (1983) 259
- Koger, J., see Mikesell . . . . . 215 (1983) 561
- Kohriki, T., see Arai . . . . . 214 (1983) 209
- Kohriki, T., see Arai . . . . . 217 (1983) 181
- Koide, K., F.C. Sampaio, E.M. Takagui, J.H. Hirata and O. Dietzsch, Preparation of ruthenium targets for high resolution charged-particle reaction spectroscopy . . . . . 215 (1983) 61
- Koide, K., A. Bairrio Nuevo, Jr., H. Takai, B. Marechal and O. Dietzsch, A single-wire proportional counter with delay-line position readout for the focal plane of a magnetic spectrograph . . . . . 215 (1983) 177
- Kok, E., see Distelbrink . . . . . 220 (1984) 433
- Kokame, J., M. Takano, T. Oshikubo, K. Chiba, K. Ukai, A. Imanishi, M. Yasue, K. Omata, S.-I. Watanabe, H. Hirai, M. Ogawa, N. Ishida, K. Kamakura, M. Fujita and K. Koba, INS real-time data processing composite system using large scale general purpose computers . . . . . 213 (1983) 317
- Koll, J., see Albanese . . . . . 212 (1983) 111
- Koltay, E., see Kiss . . . . . 212 (1983) 81
- Koltay, E., see Hunyadi . . . . . 220 (1984) 154
- Komogorova, L.V., see Barabash . . . . . 211 (1983) 331
- Kondo, I., see Yoshimori . . . . . 215 (1983) 255
- Kondo, K., see Kamon . . . . . 213 (1983) 261
- Kondo, K., see Hayashide . . . . . 216 (1983) 127
- Kondo, K., see Hayashide . . . . . 216 (1983) 135
- Kondo, K., see Minemura . . . . . 219 (1984) 472
- Kondo, K., see Abe . . . . . 220 (1984) 293
- Kondo, M., see Hatanaka . . . . . 217 (1983) 397
- Kondo, T., see Arai . . . . . 217 (1983) 181
- Kondor, A., Method of convergent weights – an iterative procedure for solving Fredholm's integral equations of the first kind . . . . . 216 (1983) 177
- König, V., see Elsener . . . . . 219 (1984) 519
- Konijn, J. and F. Hartjes, Laser track alignment calibration of drift chamber systems over four meters . . . . . 217 (1983) 311
- Kononenko, W., W. Selove, G.E. Theodosiou and R. Van Berg, A prototype sampling calorimeter readout (SPED) . . . . . 214 (1983) 237
- Koori, N., S. Oda, K. Kawamura, M. Fujiwara, K. Nagayama, N. Takeda, Y. Fujita, I. Katayama, S. Morinobu, T. Yamazaki and H. Ikegami, Other magic gas mixtures for multiwire proportional chambers . . . . . 220 (1984) 453
- Kooy, H., see Andrews . . . . . 211 (1983) 47
- Kopitzki, K., see Beck . . . . . 218 (1983) 97
- Koppitz, B., see Büngener . . . . . 214 (1983) 261
- Koppitz, B., see Büngener . . . . . 217 (1983) 254
- Korbel, V., see Albanese . . . . . 212 (1983) 111
- Korsah, J.K. and W.H. Miller, Derivative method unfolding of gamma-ray spectra from NE-213 spectrometers . . . . . 214 (1983) 441

- Korschinek, G., J. Held, A. Isoya, W. Assmann and H. Münzer, Accelerator tube tests with a 5 MV Van de Graaff ..... 220 (1984) 82
- Korschinek, G., see Assmann ..... 220 (1984) 86
- Koschar, P., see Frischkorn ..... 214 (1983) 123
- Kosina, Z., Real time spectrum stabilization by software (*Letter to the Editor*) ..... 213 (1983) 551
- Kostarakis, P., see Areti ..... 212 (1983) 135
- Kostjuchenko, V., see Rikner ..... 217 (1983) 501
- Kotkin, G.L., see Ginzburg ..... 219 (1984) 5
- Kotlicki, A., J.J. Włodarczyk and A. Wojtasiewicz The mechanism of implanted ion trapping in thick targets investigated by Mössbauer technique (*Letter to the Editor*) ..... 213 (1983) 565
- Kotthaus, R., see Binder ..... 217 (1983) 285
- Kötz, U., see Belau ..... 214 (1983) 253
- Kötz, U., see Belau ..... 217 (1983) 224
- Kouris, K., see Foster ..... 212 (1983) 301
- Kovalenko, G.D., see Filatova ..... 211 (1983) 353
- Kovalev, A.I., see Kiselev ..... 220 (1984) 399
- Kowalski, J., see Sawicki ..... 215 (1983) 567
- Kowalski, J., J. Stanek, T. Tyliczszak and J.A. Sawicki, Channeltron detecting system for conversion electron Mössbauer spectroscopy at high temperatures (*Letter to the Editor*) ..... 216 (1983) 229
- Kowalski, T.Z., Gas amplification factor in Kr + iso-pentane filled proportional counters ..... 216 (1983) 447
- Kozhukh, M.L., I.N. Belokurova, S.B. Vakhrushev, A.N. Titkov and I.L. Shul'pina, Study of Ge–Si solid solution crystals by X-ray topography and neutron diffraction ..... 213 (1983) 483
- Kozlenko, N.G., see Kiselev ..... 220 (1984) 399
- Krämer, D., K. Becker, K. Blatt, R. Čaplar, D. Fick, H. Gemmeke, W. Haeberli, H. Jänsch, O. Karban, I. Koenig, L. Luh, K.-H. Möbius, V. Nečas, W. Ott, M. Tanaka, G. Tungate, I.M. Turkiewicz, A. Weller and E. Steffens, The source of polarized heavy ions (PSI) at the Heidelberg MP tandem ..... 220 (1984) 123
- Kramer, H.M. and H. Von Seggern, The determination of X-ray spectra from attenuation data. Part I: The potentials of various methods ..... 213 (1983) 373
- Kramer, H.M., The determination of X-ray spectra from attenuation data. Part II. Experimental results ..... 214 (1983) 445
- Kramer, M.A., see Eiseman ..... 217 (1983) 140
- Krane, K.S., Some remarks concerning triple angular correlations ..... 214 (1983) 321
- Krasnokutsky, R.N., see Cerri ..... 214 (1983) 217
- Kraus, B., see Lundquist ..... 218 (1983) 563
- Kraus, D.E., see Cleland ..... 216 (1983) 405
- Krause, D.A., see Bracco ..... 219 (1984) 329
- Krause, H., see Langkau ..... 216 (1983) 19
- Krauss, G., see Beck ..... 218 (1983) 97
- Kreinick, D.L., see Andrews ..... 211 (1983) 47
- Křemének, J., see Franc ..... 211 (1983) 159
- Kretsinger, R.H., see Sobottka ..... 220 (1984) 575
- Krick, M.S. and J.E. Swansen, Neutron multiplicity and multiplication measurements ..... 219 (1984) 384
- Krist, Th. and P. Mertens, Proton energies at the maximum of the electronic stopping cross section in materials with  $57 \leq Z_2 \leq 83$  ..... 218 (1983) 790
- Krist, Th. and P. Mertens, Stopping ratios for 30–330 keV light ions in materials with  $57 \leq Z_2 \leq 83$  ..... 218 (1983) 821
- Krištiak, J., S. Tomek and V. Hnatowicz, Timing characteristics of pulses from Ge(Li) detector and their simulation by a Monte Carlo method ..... 211 (1983) 413
- Kritzinger, J.J., see McMurray ..... 219 (1984) 29
- Križan, P., see Kernel ..... 214 (1983) 273
- Krolzig, A., G. Materlik, M. Swars and J. Zegenhagen, A feedback control system for synchrotron radiation double crystal instruments ..... 219 (1984) 430
- Kromer, B., see Schlosser ..... 216 (1983) 155
- Kroupa, M., see Freedman ..... 215 (1983) 71
- Kruger, A., see Mathews ..... 213 (1983) 155
- Krüger, J., see Albanese ..... 212 (1983) 111
- Krupman, A.I., see Katkov ..... 212 (1983) 327
- Krupp, H., see Klages ..... 219 (1984) 269
- Ku, W.H.-M., see Hailey ..... 213 (1983) 397
- Kubota, T., see Niimura ..... 211 (1983) 203
- Kubota, Y., see Ehrlich ..... 211 (1983) 17
- Kubota, Y., F. Morrow, S. Stone and R. Wilcke, Performance of the CLEO dE/dx system ..... 217 (1983) 249
- Kubsch, M., see Dörfel ..... 214 (1983) 435



- Kukreja, L.M., D.D. Bhawalkar, S. Biswas, N. Durgaprasad, P.J. Kajarekar, M.N. Vahia, J.S. Yadav, C. Basu and J.N. Goswami, Cutting thin sheets of allyl diglycol carbonate (CR-39) with a CW CO<sub>2</sub> laser: instrumentation and parametric investigation . . . . . 219 (1984) 196
- Kulda, J., see Mikula . . . . . 211 (1983) 519
- Kulik, A.V., see Binon . . . . . 214 (1983) 269
- Kumada, M., H. Sasaki, H. Someya and I. Sakai, Optimization on the end-shaping of a quadrupole magnet . . . . . 211 (1983) 283
- Kumanomido, H., see Mori . . . . . 211 (1983) 429
- Kumar, B.R., see Hartner . . . . . 216 (1983) 113
- Kumar, R., see Rabalais . . . . . 218 (1983) 719
- Kumar, S., J.S. Yadav, S. Chander and A.P. Sharma, Study of heavy ion tracks in soda glass . . . . . 215 (1983) 535
- Kummel, A.C., see Haring . . . . . 211 (1983) 529
- Kurita, I., see Minemura . . . . . 219 (1984) 472
- Kurkov, A.A., see Golovkov . . . . . 212 (1983) 167
- Kuroda, K., see Ditta . . . . . 220 (1984) 343
- Kuroda, K.-I., see Azaiez . . . . . 211 (1983) 335
- Kurokawa, S., H. Hirabayashi and E. Kikutani, Low-energy separated beam K3 at KEK . . . . . 212 (1983) 91
- Kurokawa, S., see Abe . . . . . 220 (1984) 293
- Kushneriuk, S.A., see Häusser . . . . . 213 (1983) 301
- Kusmiss, J.H., see Dabrowski . . . . . 213 (1983) 89
- Kusmiss, J.H., see Szymczyk . . . . . 213 (1983) 115
- Kusmiss, J.H., see Iwanczyk . . . . . 213 (1983) 123
- Kutschera, W., D. Frekers, R. Pardo, K.E. Rehm, R.K. Smither and J.L. Yntema, A search for doubly-charged negative ions via accelerator mass spectrometry . . . . . 220 (1984) 118
- Kuzminski, J., R. Holzmann, M. Loiselet, M.A. Van Hove and J. Vervier, A versatile noble-gas scintillator detector for Coulomb excitation experiments . . . . . 217 (1983) 449
- Kwong, K.K., see Aihara . . . . . 217 (1983) 259
- La Marche, P.H., see Levi-Setti . . . . . 218 (1983) 368
- La Monaca, A., see Allocca . . . . . 219 (1984) 227
- La Padula, C.D., see Bazzano . . . . . 214 (1983) 481
- La Padula, C., see Ubertini . . . . . 217 (1983) 97
- Labedzki, J., see Chalupka . . . . . 217 (1983) 113
- Labrie, R., see Côté . . . . . 219 (1984) 456
- Lacroix, F., see More . . . . . 214 (1983) 531
- Lafferty, G.D., see Bussey . . . . . 211 (1983) 301
- Lafond, C., see Aurouet . . . . . 211 (1983) 309
- Laget, J.P., see Dei-Cas . . . . . 220 (1984) 165
- Laichter, Y., see Neidel . . . . . 212 (1983) 299
- Laichter, Y., see Geissel . . . . . 215 (1983) 329
- Lalanne, D., see Dudelzak . . . . . 217 (1983) 208
- Lam, K., see Levi-Setti . . . . . 218 (1983) 368
- Lam, S.T., see Khaliqzaman . . . . . 216 (1983) 481
- Lambert, R.P., J.W. Jury and N.K. Sherman, Measurement of bremsstrahlung spectra from 25 MeV electrons on Ta as a function of radiator thickness and emission angle . . . . . 214 (1983) 349
- Lamonds, H.A., Review of mercuric iodide development program in Santa Barbara . . . . . 213 (1983) 5
- Lanceri, L., see Azaiez . . . . . 211 (1983) 335
- Lancman, H., see Zhang . . . . . 214 (1983) 391
- Land, D.J., D.G. Simons and M.D. Brown, Optimized basis states for inner-shell ionization . . . . . 214 (1983) 35
- Landgraf, U., see Albanese . . . . . 212 (1983) 111
- Lane, J.B., see Bussey . . . . . 211 (1983) 301
- Lanford, W.A., see Wielunski . . . . . 218 (1983) 120
- Langeset, B., see Grüb . . . . . 214 (1983) 469
- Langkau, R., H. Krause, W. Peters, N. Schirm and W. Scobel, Radial oscillation analysis by internal beam pulse TOF measurements at the Hamburg Isochronous Cyclotron . . . . . 216 (1983) 19
- Langland, J.K., see Downing . . . . . 218 (1983) 47
- Langouche, G., see Wu . . . . . 218 (1983) 652
- Lanier, R.G., see Becker . . . . . 211 (1983) 379
- Lanou, R.E., see Engelmann . . . . . 216 (1983) 45
- Lans, J. v.d., see Carosi . . . . . 219 (1984) 311
- Lanske, D., see Albanese . . . . . 212 (1983) 111
- Laplanche, F., see Dudelzak . . . . . 217 (1983) 208

Lappalainen, R., A. Anttila and J. Räisänen, Absolute $\alpha$ -induced thick-target gamma-ray yields for the elemental analysis of light elements	212 (1983) 441
Larricia, P., see Andrews	211 (1983) 47
Larson, D., see Andrews	211 (1983) 47
Larson, J.D., see Busse	220 (1984) 26
Laszewski, R.M., Design of a passive magnetic shunt for the extraction of electron beams from a photon tagging spectrometer	213 (1983) 195
Latta, B.M., Comparison of Blaugrund and Monte Carlo centroid-shift calculations	211 (1983) 447
Latz, R., see Frischkorn	214 (1983) 123
Lauterbach, Ch., see Schandera	217 (1983) 128
Laville, J.L., see Louvel	211 (1983) 535
Lavopa, P., see De Marzo	217 (1983) 405
Law, W.S., see Miller	216 (1983) 219
Lawson, J.D., New ideas for accelerating particles	220 (1984) 217
Layter, J.G., see Aihara	217 (1983) 259
Leake, J.W., see Sephton	219 (1984) 534
Lebeau, M., see Albanese	212 (1983) 111
Lebo, C., see Madey	214 (1983) 401
Lebo, C., see Watson	215 (1983) 413
LeBritton, J., see Nelson	216 (1983) 381
Lebrun, P., see Areti	212 (1983) 135
Lebrun, P., see Cox	219 (1984) 487
Lebrun, P., see Cox	219 (1984) 491
Lechanoine-Le Luc, C., see Aprile-Giboni	215 (1983) 147
Lecoq, B., see Bénichou	217 (1983) 163
Lecoq, J., J.D. Berst, J.P. Froberger, J.M. Meyer and M. Perrin, A fast arithmetical unit used with microprogrammable processors	213 (1983) 329
Lecoq, P., see Benichou	214 (1983) 245
Lederman, L., see Adams	217 (1983) 237
Ledingham, K.W.D., see Raine	217 (1983) 305
Lednev, A.A., see Inyakin	215 (1983) 103
Lee, J.K.P., see Lone	214 (1983) 333
Lee, W.-P., see Chirovsky	219 (1984) 103
Lefevre, H.W., R.C. Connolly, G. Sieger and J.C. Overley, Scanning MeV-ion microprobe for light and heavy ions	218 (1983) 39
Lefevre, H.W., see Overley	218 (1983) 43
Legge, G.J.F., see Sealock	218 (1983) 217
Lehraus, I., Progress in particle identification by ionization sampling	217 (1983) 43
Leleux, P., see Bol	214 (1983) 169
Leo, W., see Aprile-Giboni	215 (1983) 147
Lesiecki, H., see Guldbakke	211 (1983) 559
Lessard, L. and A.J. Houdayer, Method for quantitative PIXE analysis of powdered pottery samples bound in an organic matrix	216 (1983) 241
Letournel, M., J.C. Oberlin, G. Heng, J. Heugel and P. Wagner, Second step of the upgrading of the Strasbourg MP (16–18 MV)	220 (1984) 10
Letournel, M. and the Vivitron Group, The Strasbourg project: a Vivitron of 35 MV	220 (1984) 133
Lettau, H., H.G. Bohlen, H. Rossner, W. Von Oertzen and M. Martin, Precise angular distribution measurements for high energetic ions	213 (1983) 187
Leutenecker, R., see Eichinger	218 (1983) 489
Levi, A., see Nissenbaum	213 (1983) 27
Levi, A., A. Bürger, M. Schieber, L. Van den Berg, W.B. Yelon and R.W. Alkire, Fabrication of HgI <sub>2</sub> nuclear radiation detectors by machine cleaving	213 (1983) 31
Levi, A., A. Bürger, J. Nissenbaum, M. Schieber and Z. Burshtein, Search for improved surface treatment procedures in fabrication of HgI <sub>2</sub> X-ray spectrometers	213 (1983) 35
Levi, M., see Blocker	216 (1983) 71
Levi-Setti, R., P.H. La Marche, K. Lam, T.H. Shields and Y.-L. Wang, Secondary ion imaging in the scanning ion microscope	218 (1983) 368
Levin, I., see Breskin	217 (1983) 107
Lewis, G.C., G. Mohammad, L.D. Wyly, E.T. Patronis and C.H. Braden, Triple gamma ray directional correlation in <sup>154</sup> Gd	211 (1983) 371

- Lewis, M.B., Improved extraction of zirconium and molybdenum beams from a Penning discharge ion source (*Letter to the Editor*) . . . . . 219 (1984) 247
- Liang Xiao-Zhong and Cao Jing-Xi, A fast high resolution ADC based on the flash type with a special error correcting technique . . . . . 220 (1984) 457
- Lickly, T.D., see Blanchard . . . . . 219 (1984) 413
- Lieberman, M., see Andrews . . . . . 211 (1983) 47
- Lieder, R.M., H. Jäger, A. Neskakis, T. Venkova and C. Michel, Design of a bismuth germinate anti-Compton spectrometer and its use in nuclear spectroscopy . . . . . 220 (1984) 363
- Liello, F., see Amendolia . . . . . 217 (1983) 317
- Lien, C.-D., L. Wieluński and M.-A. Nicolet, Comparison of the nuclear reactions  $^{18}\text{O}(\text{p}, \alpha)^{15}\text{N}$  and  $^{16}\text{O}(\text{d}, \alpha)^{14}\text{N}$  to study the oxygen effects in Pt silicide formation . . . . . 213 (1983) 463
- Lierl, H., see Binder . . . . . 217 (1983) 285
- Liggett, W., Calibration for measurements with background correction applied to uranium-235 enrichment . . . . 216 (1983) 455
- Lin, B.S., see Cormier . . . . . 212 (1983) 185
- Lin, S.H., see Ziv . . . . . 218 (1983) 742
- Lindblad, Th., see Elfström . . . . . 214 (1983) 311
- Lindblad, Th., L. Bagge, Å. Engström, J. Białkowski, C.R. Gruhn, W. Pang, M. Roach and R. Loveman, On the development of liquid ionization detectors as spectroscopic instruments . . . . . 215 (1983) 183
- Lindenbaum, S.J., see Eiseman . . . . . 217 (1983) 140
- Lindgren, L.J., A. Sandell and M. Eriksson, Fast kicker magnet system . . . . . 214 (1983) 175
- Lindgren, L.J. and M. Eriksson, Injection and extraction at MAX . . . . . 214 (1983) 179
- Lindgren, L.J. and A. Sandell, An investigation of two position-sensitive PPACs . . . . . 219 (1984) 149
- Lindner, G., see Wichert . . . . . 218 (1983) 633
- Lindsey, C.S., see Aihara . . . . . 217 (1983) 259
- Linker, G., see Kaufmann . . . . . 218 (1983) 647
- Lintern, A.L., see Bailey . . . . . 213 (1983) 201
- Lipari, P., see Andrews . . . . . 211 (1983) 47
- Lipnik, P., see Bol . . . . . 214 (1983) 169
- Littlewood, S.D., see Kilner . . . . . 218 (1983) 573
- Liu, J.M., see Bilello . . . . . 215 (1983) 291
- Ljuslin, C., see Anders . . . . . 219 (1984) 66
- Lobkowicz, F., see Andrews . . . . . 211 (1983) 47
- Lobkowicz, F., see Chandlee . . . . . 215 (1983) 369
- Lobkowicz, F., see Nelson . . . . . 216 (1983) 381
- Logan, C.M., see Garibaldi . . . . . 211 (1983) 213
- Loiselet, M., see Kuzminski . . . . . 217 (1983) 449
- Loken, J., see Albanese . . . . . 212 (1983) 111
- Loken, S.C., see Aihara . . . . . 217 (1983) 259
- Lomanov, M., see Rikner . . . . . 217 (1983) 501
- Lombaard, J., J. Conradie and E. Friedland, Energy-loss and straggling of hydrogen and helium ion in silver . . . 216 (1983) 293
- London, G.W., see Aihara . . . . . 217 (1983) 259
- Lone, M.A., see Häusser . . . . . 213 (1983) 301
- Lone, M.A., R.T. Jones, A. Okazaki, B.M. Townes, D.C. Santry, E.D. Earle, J.K.P. Lee, J.M. Robson, R.B. Moore, L. Nikkinen and V. Raut, Total neutron yields from 100 MeV protons on Pb and  $^7\text{Li}$  targets . . . . . 214 (1983) 333
- Longacre, R.S., see Eiseman . . . . . 217 (1983) 140
- Longoni, A., see Gatti . . . . . 220 (1984) 445
- Longuemare, C., see Dudelzak . . . . . 217 (1983) 208
- Loomis, W.A., see Andrews . . . . . 211 (1983) 47
- Lopes, J.S., see Jesus . . . . . 214 (1983) 29
- Lopez, B., see Beyerle . . . . . 213 (1983) 107
- Lord, J., see Nelson . . . . . 215 (1983) 385
- Lord, R.S., see Jones . . . . . 220 (1984) 1
- Loude, J.-F., see Antille . . . . . 217 (1983) 327
- Louvel, M., G. Bizard, A. Drouet, J. Jabbour, J.L. Laville, R. Regimbart, C. Stephan and L. Tassan-Got, New measurements of equilibrium charge state distributions of fast medium heavy ions in mylar . . . . . 211 (1983) 535
- Love, W.A., see Eiseman . . . . . 217 (1983) 140
- Loveman, R., see Lindblad . . . . . 215 (1983) 183
- Loxton, C.M., I.S.T. Tsong and H.W. Pickering, The effects of oxygen adsorption on Cu–Ni alloys during irradiation studied by SIMS, SIPS and ISS . . . . . 218 (1983) 340
- Lu, K. and E.A. Stern, Size effect of powdered sample on EXAFS amplitude . . . . . 212 (1983) 475
- Lu, X.-Q., see Aihara . . . . . 217 (1983) 259



- Lucas, M.C., see Moss . . . . . 219 (1984) 558
- Luccio, A., P. Mortazavi and L. Yü, Studies on the magnetic field of a permanent magnet undulator for a free electron laser . . . . . 219 (1984) 213
- Lucherini, V., see Capitani . . . . . 216 (1983) 307
- Lück, H.B., Bulk response of some polymeric nuclear track detectors to ionizing radiation . . . . . 212 (1983) 371
- Lück, H.B., On the use of cellulose nitrate as solid state nuclear track detector. Part I: Detector preparation and etching behaviour . . . . . 212 (1983) 479
- Lück, H.B., On the use of cellulose nitrate as solid state nuclear track detector. Part II: Response to light particles and applications . . . . . 212 (1983) 483
- Lück, H.B., On the use of polyethyleneterephthalate as solid state nuclear track detector: kinetics and mechanism of particle track etching . . . . . 213 (1983) 507
- Ludemann, C.A., see Jones . . . . . 220 (1984) 1
- Ludlam, T., see Adam . . . . . 217 (1983) 291
- Luh, L., see Krämer . . . . . 220 (1984) 123
- Lukjashin, V., see Rikner . . . . . 217 (1983) 501
- Lumb, D.H. and G.R. Hopkinson, Charge diffusion effects in CCD X-ray detectors, II. Experimental results . . . . . 216 (1983) 431
- Luminari, L., see Abt . . . . . 217 (1983) 377
- Lundquist, T.R., B. Kraus and P.R. Swann, Ion sputtered deposit analysis by electron microscopy . . . . . 218 (1983) 563
- Lunev, V.I., see Golovkov . . . . . 212 (1983) 167
- Luo Daling, see Zhang Chungxiang . . . . . 215 (1983) 481
- Lupiltsev, V.P., see Zrelov . . . . . 215 (1983) 141
- Luste, G.J., see Hartner . . . . . 216 (1983) 113
- Lustov, N.M., see Barabash . . . . . 211 (1983) 331
- Lutz, G., see Belau . . . . . 214 (1983) 253
- Lutz, G., see Belau . . . . . 217 (1983) 224
- Luukkainen, A., see Keinonen . . . . . 216 (1983) 249
- Lwin, T., see Eisler . . . . . 214 (1983) 421
- Lyashenko, V.I., see Exnerova . . . . . 217 (1983) 425
- Lynch, G.R., see Aihara . . . . . 217 (1983) 259
- Lynn, R., see Iwaczyk . . . . . 213 (1983) 123
- Ma, Y.Q., see Ayre . . . . . 220 (1984) 549
- MacArthur, J.D., G.R. Palmer, W.E. Hekman and K. Budd, Elemental analysis of algae with PIXE and PIGME . . . . . 218 (1983) 519
- Macciotta, P., see Bressani . . . . . 211 (1983) 231
- MacDonald, J.A., see Hargrove . . . . . 219 (1984) 461
- MacDonald, J.D., see Overley . . . . . 218 (1983) 43
- MacDonald, J.R., see Selen . . . . . 218 (1983) 451
- MacDonald, J.R., L.C. Feldman, P.J. Silverman, J.A. Davies, K. Griffiths, T.E. Jackman, P.R. Norton and W.N. Unertl, Auger electron emission induced by MeV  $H^+$  and  $He^+$  ions . . . . . 218 (1983) 765
- MacDonald, R.J., see Garrett . . . . . 218 (1983) 333
- MacKay, W.W., see Andrews . . . . . 211 (1983) 47
- Macq, P., see Bol . . . . . 214 (1983) 169
- Madakson, P.B., A study of impurity mobility in ion-implanted Al by Rutherford backscattering . . . . . 218 (1983) 537
- Madansky, L., see Aihara . . . . . 217 (1983) 259
- Madaras, R.J., see Aihara . . . . . 217 (1983) 259
- Madden, N.W., see Jaklevic . . . . . 214 (1983) 517
- Madey, R., J.W. Watson, M. Ahmad, B.D. Anderson, A.R. Baldwin, A.L. Casson, W. Casson, R.A. Cecil, A. Fazely, J.M. Knudson, C. Lebo, W. Pairsuwan, P.J. Pella, J.C. Varga and T.R. Witten, Large volume neutron detectors with subnanosecond time dispersions . . . . . 214 (1983) 401
- Madey, R., see Watson . . . . . 215 (1983) 413
- Madiba, C.C.P., see Sellschop . . . . . 218 (1983) 23
- Madiba, C.C.P., J.P.F. Sellschop, H.J. Annegarn and B.R. Appleton, Quantification of hydrogen in solids by two methods of ion beam analysis . . . . . 218 (1983) 409
- Madiba, C.C.P., see Derry . . . . . 218 (1983) 559
- Maeda, K., see Iwata . . . . . 219 (1984) 123
- Maggi, G., see De Palma . . . . . 216 (1983) 393
- Maggi, G., see De Palma . . . . . 217 (1983) 135
- Maggi, G., see De Marzo . . . . . 217 (1983) 405
- Maggi, G., see De Palma . . . . . 219 (1984) 87
- Maggiore, C.J., see Veesser . . . . . 215 (1983) 529
- Maggiore, C.J., see Thompson . . . . . 218 (1983) 475

Magnanini, R., see Tedeschi	214 (1983) 509
Maiburov, S., see Fabjan	216 (1983) 105
Maier, K.H., see Becker	211 (1983) 379
Maier, P., see Grüb	214 (1983) 469
Maire, M., see Albanese	212 (1983) 111
Maishev, V.A., see Frolov	216 (1983) 93
Majewski, S., see Anderson	217 (1983) 217
Majewski, S., G. Charpak, A. Breskin and G. Mikenberg, A thin multiwire chamber operating in the high multiplication mode	217 (1983) 265
Majewski, S., see Breskin	220 (1984) 349
Majka, R., see Aihara	217 (1983) 259
Makdisi, Y., see Chandlee	215 (1983) 369
Makdisi, Y., see Nelson	216 (1983) 381
Maki, A., see Adams	217 (1983) 237
Maki, A., see Abe	220 (1984) 293
Mallet, J., see Aihara	217 (1983) 259
Maltsev, E.I., see Barabash	211 (1983) 331
Manarin, A., L. Pregernig, M. Rabany, R. Saban and G. Vismara, Drift chamber electronics with multi-hit capability	217 (1983) 335
Manchanda, R.K., see Bazzano	214 (1983) 481
Mandjukova, B.V., see Mandjukov	213 (1983) 477
Mandjukov, I.G., B.V. Mandjukova, V.G. Jelev and N.V. Markova, A simple experimental technique for very small Mössbauer line shifts using resonance detectors	213 (1983) 477
Manfredi, P.F. and V. Speziali, Optoelectronic link for analog signals from solid state detectors in high energy physics	211 (1983) 83
Mangeot, Ph., G. Coutrakon, J.R. Hubbard, J. Mullié, J. Tichit, A. Zadra, R. Bouclier, G. Charpak, J. Million, A. Peisert, J.C. Santiard, F. Sauli, C.N. Brown, D. Finley, H. Glass, J. Kirz and R.L. McCarthy, Progress in Cherenkov ring imaging. Part 2: Identification of charged hadrons at 200 GeV/c	216 (1983) 79
Mangeot, Ph., see Adams	217 (1983) 237
Mank, G., see Drexler	220 (1984) 409
Mann, J.E., see Jones	220 (1984) 1
Mann, L.G., see Becker	211 (1983) 379
Mann, L.G., see Decman	219 (1984) 523
Mannelli, I., see Carosi	219 (1984) 311
Männer, W., see Belau	217 (1983) 224
Mannocchi, G., see Battistoni	217 (1983) 429
Mannocchi, G., see Battistoni	217 (1983) 433
Mannocchi, G., see Battistoni	219 (1984) 300
Mannspurger, H., see Damjantschitsch	218 (1983) 219
Manz, A., see Albanese	212 (1983) 111
Manz, A., see De Marzo	217 (1983) 405
Manzo, G., see Sims	211 (1983) 499
Marbot, R., see Mine	211 (1983) 561
Marcantonio, K.J., see Boring	218 (1983) 707
Marcuso, T.L.M., S.J. Rothman, L.J. Nowicki and P. Baldo, A computer program for nuclear reaction analysis with the $D(^3\text{He}, \alpha) \text{H}$ reaction ( <i>Letter to the Editor</i> )	211 (1983) 227
Marechal, B., see Koide	215 (1983) 177
Margaryan, K.Zh., see Astabatyán	219 (1984) 78
Margaziotis, D.J., see Bracco	219 (1984) 329
Mariscotti, M.A.J., see Perez Ferreira	220 (1984) 37
Markakis, J., see Beyerle	213 (1983) 107
Markakis, J., see Szymczyk	213 (1983) 115
Markakis, J., see Iwanczyk	213 (1983) 123
Markees, A., see Drescher	216 (1983) 35
Markova, N.V., see Mandjukov	213 (1983) 477
Marquardt, N., see Treichel	212 (1983) 101
Marshak, M., see Chandlee	215 (1983) 369
Marshak, M., see Nelson	216 (1983) 381
Marshall, R., see Dietrich	217 (1983) 160
Martin, A., see Azaiez	211 (1983) 335
Martin, J.A., see Jones	220 (1984) 1

Martin, J.F., see Hartner	216 (1983) 113
Martin, J.P., see Groleau	218 (1983) 11
Martin, M., see Lettau	213 (1983) 187
Martin, P.S., see Aihara	217 (1983) 259
Martin, S., see Sobie	219 (1984) 501
Martin, S.A., A. Hardt, J. Meissburger, G.P.A. Berg, U. Hacker, W. Hürlimann, J.G.M. Römer, T. Sagefka, A. Retz, O.W.B. Schult, K.L. Brown and K. Halbach, The QQDDQ magnet spectrometer "BIG KARL"	214 (1983) 281
Martins, J.B., see Knöfel	212 (1983) 387
Martone, M., see Bizzarri	215 (1983) 511
Maruyama, K., see Aihara	217 (1983) 259
Marx, J.N., see Aihara	217 (1983) 259
Marx, M.D., see Engelmann	216 (1983) 45
Masek, G.E., see Van Driel	215 (1983) 113
Maslov, M.A., N.V. Mokhov and A.V. Uzunian, Calculation of muonic fields around large high energy proton accelerators	217 (1983) 419
Massa, I., see Capponi	217 (1983) 465
Massai, M.M., see Perez-Mendez	217 (1983) 89
Massai, M.M., see Bellazzini	217 (1983) 93
Massaro, E., G. Auriemma and E. Costa, Semiempirical formulae for $\gamma$ -ray absorption coefficients for high-Z scintillators	219 (1984) 134
Masterson, T., see Sobie	219 (1984) 501
Mastropietro, M., see Bazzano	214 (1983) 481
Mastropietro, M., see Ubertini	217 (1983) 97
Materlik, G., see Krolzig	219 (1984) 430
Mathews, G.J., see Haight	212 (1983) 245
Mathews, H.-G., A. Kruger, S. Penselin and A. Weinig, The new high intensity polarized proton and deuteron source for the Bonn isochronous cyclotron	213 (1983) 155
Matis, H.S., see Bolton	217 (1983) 173
Matoba, M. and T. Sakae, Position integral linearity of charge-division type position-sensing system and a method to obtain the total charge signal	219 (1984) 160
Matsumoto, A., see Niimura	211 (1983) 203
Matsumoto, A., see Takagi	215 (1983) 207
Matsuoka, N., see Nakamura	212 (1983) 173
Matsuoka, N., see Hatanaka	217 (1983) 397
Matsuzawa, H., see Kanai	214 (1983) 491
Matsuzaki, T., see Ogawa	215 (1983) 167
Mattern, D., see Bleichert	212 (1983) 145
Matthes, H., W. Pfestorf and L. Steinert, The effect of the source optics and the temperature of the sputter surface on the negative ion yield of the sputter source MISS-4M	220 (1984) 112
Matthews, I.P., see Foster	212 (1983) 301
Matthews, J.A.J., see Aihara	217 (1983) 259
Matthiesen, U., see Drescher	216 (1983) 35
Maurel, B. and G. Amsel, A new measurement of the 429 keV $^{15}\text{N}(\text{p}, \alpha\gamma)^{12}\text{C}$ resonance. Applications of the very narrow width found to $^{15}\text{N}$ and $^1\text{H}$ depth location. I. Resonance width measurement	218 (1983) 159
Maurel, B., see Amsel	218 (1983) 183
Maurer, R.J., R.L. Watson and G.J. Pedrazzini, Spectra of $n\text{p}$ -1s transitions excited during the passage of 48 MeV Mg ions through thin and thick carbon targets	214 (1983) 117
Mavis, D.G., see Dunham	219 (1984) 46
Maxia, V., see Delunas	213 (1983) 563
May, J., see Amendolia	217 (1983) 317
Maydell-Ondrusz, E., see Kilner	218 (1983) 573
Maydell-Ondrusz, E.A., see Hemment	218 (1983) 103
Mazur, C. and M. Ribrag, Position sensitive multiwire proportional parallel plate detector for heavy ions	212 (1983) 203
Mazur, P.O., see Cox	219 (1984) 487
Mazur, P.O., see Cox	219 (1984) 491
Mazzolini, A.P., see Sealock	218 (1983) 217
McAbee, T.L., Screening effects for excitation probabilities in ion-atom collisions	214 (1983) 89
McBeth, G.W., see Mylon	217 (1983) 459
McCall, R.C., see Ing	219 (1984) 41
McCarthy, R., see Adams	217 (1983) 237
McCarthy, R.L., see Mangeot	216 (1983) 79



- McConnell, J.W., see Bell . . . . . 211 (1983) 551
- McCubbin, N.A., see Albrow . . . . . 214 (1983) 201
- McDaniel, F.D., Direct ionization and capture in inner-shell processes . . . . . 214 (1983) 57
- McDonald, R.J., L.G. Sobotka, Z.Q. Yao, G.J. Wozniak and G. Guarino, Large solid angle Bragg-curve spectrometer . . . . . 219 (1984) 508
- McEwen, J.G., see Borgeaud . . . . . 211 (1983) 363
- McLaughlin, D., see Fegan . . . . . 211 (1983) 179
- McLaughlin, M., see Chandlee . . . . . 215 (1983) 369
- McLaughlin, M., see Nelson . . . . . 216 (1983) 381
- McMurray, W.R., J.J. Kritzing, V.C. Wikner, T. Swart and H. Schmitt, A 0.2 ns beam pulse for the 6 MV Van de Graaff accelerator . . . . . 219 (1984) 29
- Meddi, F., see Baroni . . . . . 214 (1983) 381
- Medved, S.A., see Cerri . . . . . 214 (1983) 217
- Mehta, S.K., I.K. Oommen, S. Sengupta and S.D. Soman, Gamma dosimetry using lyoluminescence of Tris (hydroxymethyl) aminomethane . . . . . 213 (1983) 393
- Meinel, K., see Klein . . . . . 220 (1984) 200
- Meissburger, J., see Martin . . . . . 214 (1983) 281
- Melissinos, A.C., see Andrews . . . . . 211 (1983) 47
- Meller, R., see Aharonian . . . . . 212 (1983) 23
- Melnikoff, S.O., see Aihara . . . . . 217 (1983) 259
- Melone, S., P. Puliti and F. Rustichelli, Limitation of the Mellin transform for small angle scattering by nearly spherical particles . . . . . 214 (1983) 459
- Mende, G., see Von Borany . . . . . 212 (1983) 489
- Mercer, D., see Bussey . . . . . 211 (1983) 301
- Mermet-Guyennet, M., see Albanese . . . . . 212 (1983) 111
- Mertens, P., see Krist . . . . . 218 (1983) 97
- Mertens, P., see Krist . . . . . 218 (1983) 790
- Mertler, G., see Beck . . . . . 218 (1983) 821
- Merz, J.L., Z.L. Wu, L. Van den Berg and W.F. Schneppe, Low temperature photoluminescence of detector-grade HgI<sub>2</sub> . . . . . 213 (1983) 51
- Mes, H., see Hargrove . . . . . 219 (1984) 461
- Meschini, M., see Battistoni . . . . . 217 (1983) 429
- Metcalf, M., see Abt . . . . . 217 (1983) 377
- Meyer, J.M., see Lecoq . . . . . 213 (1983) 329
- Meyer, M., see Blüm . . . . . 213 (1983) 251
- Meyer, O., see Kaufmann . . . . . 218 (1983) 647
- Meyer, P., see Weathersby . . . . . 220 (1984) 571
- Meyer, T., see Amendolia . . . . . 217 (1983) 317
- Meyer, W., K.H. Althoff, W. Havenith, H. Riechert, E. Schilling and G. Sternal, Irradiated ammonia (NH<sub>3</sub>) as target material for polarized proton targets . . . . . 215 (1983) 65
- Michaelis, E.G., see Kernel . . . . . 214 (1983) 273
- Michaelis, W., see The . . . . . 212 (1983) 445
- Michaelsen, R., see Busse . . . . . 220 (1984) 26
- Michalowicz, A., see Azaiez . . . . . 211 (1983) 335
- Michalowicz, A., see Ditta . . . . . 220 (1984) 343
- Michel, C., see Lieder . . . . . 220 (1984) 363
- Michel, E., see Danilov . . . . . 217 (1983) 153
- Michotte, D., see Binon . . . . . 214 (1983) 269
- Middleton, R., A versatile high intensity negative ion source . . . . . 214 (1983) 139
- Middleton, R., J. Klein, G.M. Raisbeck and F. Yiou, Accelerator mass spectrometry with <sup>26</sup>Al . . . . . 218 (1983) 430
- Middleton, R., A versatile high intensity negative ion source . . . . . 220 (1984) 105
- Migneco, E., Progress report on the Laboratorio Nazionale del Sud (LNS) at Catania . . . . . 220 (1984) 14
- Migneco, E., see Calabretta . . . . . 220 (1984) 158
- Mikenberg, G., see Majewski . . . . . 217 (1983) 265
- Mikesell, J.L., D.W. Dotson, F.E. Senftle, R.S. Zych, J. Koger and L. Goldman, In situ capture gamma-ray analysis of coal in an oversize borehole . . . . . 215 (1983) 561
- Mikesell, J.L., see Evans . . . . . 219 (1984) 233
- Mikhailov, V.S., see Cerri . . . . . 214 (1983) 217
- Mikhailov, Yu.V., see Binon . . . . . 214 (1983) 269
- Mikula, P., J. Kulda, J. Cervená, B. Chalupa, B. Hasková and J. Vávra, A statically bent silicon single crystal as a thermal neutron filter . . . . . 211 (1983) 519

Mikumo, T., see Shima	217 (1983) 515
Mikuni, H., see Asaoka	215 (1983) 493
Mikuž, M., see Kernel	214 (1983) 273
Milberg, J., see Perez Ferreira	220 (1984) 37
Mildebrath, M.E., see Cipolla	218 (1983) 777
Miljanić, Đ., see Blagus	216 (1983) 415
Miller, C.A., see Bracco	219 (1984) 329
Miller, D.J., see Brisson	215 (1983) 79
Miller, J.N., High precision SIMS measurements of dopant concentration in III–V semiconductors	218 (1983) 547
Miller W.H., see Korsah	214 (1983) 441
Miller, W.H., W.S. Law and R.M. Brugger, Thermal neutron driven, 14.1 MeV neutron generators	216 (1983) 219
Million, J., see Mangeot	216 (1983) 79
Milotti, E., see Amendolia	217 (1983) 317
Milstein, F., B. Farber, K. Kim, L. Van den Berg and W.F. Schneppe, Influence of temperature upon dislocation mobility and elastic limit of single crystal HgI <sub>2</sub>	213 (1983) 65
Minamisono, T., see Asahi	220 (1984) 389
Mine, P., L. Hadjeris, T. Huang-Xuan, R. Marbot, F. Soussaline, J. Jeanjean and H. Nguyen Ngoc, A gamma-camera distortion corrector using a programmable on-line microcomputer ( <i>Letter to the Editor</i> )	211 (1983) 561
Minehara, E. and S. Abe, Mass spectrometric study of the negatively-charged krypton and xenon monofluorides	212 (1983) 533
Minemura, H., S. Mori, M. Noguchi, R. Yoshizaki, K. Kondo, R. Fast, R. Kephart, R. Wands, R. Yamada, K. Asano, I. Kamishita, I. Kurita, R. Saito, T. Suzuki and T. Yamagiwa, Feasibility test of a shrink-fit assembly of a large-diameter superconducting solenoid for a colliding beam detector	219 (1984) 472
Mingay, D.W. and B. Rosner, Enhanced yields of different charge states of nitrogen ions backscattered at 180°	216 (1983) 517
Minssieux, H., see Albanese	212 (1983) 111
Miranda, E.E., see Bjelkhagen	220 (1984) 300
Mirzadeh, S., P.P. Parekh, S. Katcoff and Y.Y. Chu, Cross-section systematics for nuclide production at a medium energy spallation neutron facility	216 (1983) 149
Mischke, R.E., see Bowman	216 (1983) 399
Mischke, R.E., see Bolton	217 (1983) 173
Mishina, M., see Hayashide	216 (1983) 127
Mistry, N.B., see Andrews	211 (1983) 47
Mitchell, I.V., H.L. Eschbach, L. Avaldi and W. Dobma, Characterisation of a new batch of ion implanted Bi in silicon specimens for use as primary reference surface standards	218 (1983) 91
Mitchell, I.V., see Rossiter	218 (1983) 639
Mitchell, I.V., see Wang	218 (1983) 669
Mitra, S., M. Biswas and S.C. Roy, Measurement of energy albedo of backscattered photons using a proportional response photon counter	220 (1984) 537
Miyagi, S., see Tomita	213 (1983) 469
Miyagi, S., see Inada	218 (1983) 567
Miyahara, Y., see Asaoka	215 (1983) 493
Miyakawa, H., see Inada	218 (1983) 607
Miyake, K., see Adams	217 (1983) 237
Miyashita, S., see Hayashide	216 (1983) 127
Miyashita, S., see Hayashide	216 (1983) 135
Miyashita, S., see Abe	220 (1984) 293
Miyata, H., see Hayashide	216 (1983) 127
Miyata, H., see Abe	220 (1984) 293
Mizobuchi, A., see Asahi	220 (1984) 389
Mo, J.N., see Sanderson	219 (1984) 250
Möbius, K.-H., see Krämer	220 (1984) 123
Modgil, S.K. and H.S. Virk, Inter-laboratory standardization of glass dosimeters	212 (1983) 367
Modis, T., see Bourquin	217 (1983) 201
Mohammad, G., see Lewis	211 (1983) 371
Mohr, W., see Albanese	212 (1983) 111
Mohsen, M., A compact Compton suppression spectrometer using bismuth germanate scintillator	212 (1983) 241
Mokhov, N.V., see Maslov	217 (1983) 419
Moltz, D.M., see Noma	211 (1983) 391
Moneti, G.C., see Andrews	211 (1983) 47
Montanet, F., see Albanese	212 (1983) 111
Montes, B., see Brisson	215 (1983) 79
Montgomery, H.E., see Albanese	212 (1983) 111

- Moody, K.J., see Groening . . . . . 214 (1983) 317
- Moore, R.B., see Lone . . . . . 214 (1983) 333
- Morand, C., see Pastor . . . . . 212 (1983) 209
- Moras, P., see Azaiez . . . . . 211 (1983) 335
- Morawska, L., see Wójcik . . . . . 212 (1983) 393
- More, N., B. Basse-Cathalinat, C. Baquey, F. Lacroix and D. Ducassou, Application of novel techniques of medical imaging to the non-destructive analysis of carbon–carbon composite materials . . . . . 214 (1983) 531
- Moreau, C., E.J. Knystautas, R.S. Timsit and R. Groleau, Quantitative analysis of light elements in a heavy material by high energy ion recoil (HEIR) spectrometry . . . . . 218 (1983) 111
- Moreno, M., see Flores . . . . . 212 (1983) 375
- Morenzoni, S., see Aprile-Giboni . . . . . 215 (1983) 147
- Morgan, A.E., A comparison of secondary ion mass spectrometry and Auger electron spectroscopy as surface analytical techniques . . . . . 218 (1983) 401
- Mori, C., T. Sugiyama and T. Watanabe, Determination of local absolute detection efficiency of a Ceratron with  $^{55}\text{Fe}$  Auger electrons . . . . . 211 (1983) 407
- Mori, C., H. Kumanomido and T. Watanabe, Background compensated GM counter for the measurement of low level  $\beta$ -activity . . . . . 211 (1983) 429
- Mori, S., see Minemura . . . . . 219 (1984) 472
- Mori, T., see Aoyama . . . . . 212 (1983) 281
- Mori, T., see Tsuda . . . . . 219 (1984) 588
- Mori, Y., K. Ikegami, A. Takagi, S. Fukumoto and W.D. Cornelius, Measurement of electron polarization of optically pumped sodium atoms . . . . . 220 (1984) 264
- Morinaud, J., see Brisson . . . . . 215 (1983) 79
- Morinobu, S., see Fujita . . . . . 217 (1983) 441
- Morinobu, S., see Koori . . . . . 220 (1984) 453
- Morrill, S.M., see Dixon . . . . . 213 (1983) 525
- Morris, T.W., see Eiseman . . . . . 217 (1983) 140
- Morris, Jr., J.W., see Fultz . . . . . 211 (1983) 569
- Morrison, T.P., see James . . . . . 212 (1983) 545
- Morrow, F., see Andrews . . . . . 211 (1983) 47
- Morrow, F., see Kubota . . . . . 217 (1983) 249
- Morsi, M.M., S. El-Konsol and M.A. Adawi, Track characteristics and detection in borate glasses doped with fissionable material . . . . . 217 (1983) 495
- Mortazavi, P., see Luccio . . . . . 219 (1984) 213
- Moser, K., see Albanese . . . . . 212 (1983) 111
- Moses, W., see Aihara . . . . . 217 (1983) 259
- Mosko, S.W., see Jones . . . . . 220 (1984) 1
- Moss, C.E., E.J. Dowdy, A.E. Evans, M.E. Hamm, M.C. Lucas and E.R. Shunk, Unfolding bismuth-germanate pulse-height distributions to determine gamma-ray flux spectra and dose rates . . . . . 219 (1984) 558
- Moss, G.R., see Grande . . . . . 215 (1983) 539
- Moszyński, M., J. Vacher and R. Odru, Timing properties of a R1294Z microchannel plate photomultiplier . . . . . 217 (1983) 453
- Mouchka, L., see Abdushukurov . . . . . 217 (1983) 101
- Moum, G., see Berliner . . . . . 213 (1983) 333
- Mount, R.P., see Albanese . . . . . 212 (1983) 111
- Movchan, S.A., see Abdushukurov . . . . . 217 (1983) 101
- Moynot, M., see Albanese . . . . . 212 (1983) 111
- Mueller, J.J., see Andrews . . . . . 211 (1983) 47
- Muheim, J.T., T. Kobayashi and E. Kaldis, Spark source mass spectrographic analyses of  $\alpha\text{-HgI}_2$ : A comparison of samples from different laboratories . . . . . 213 (1983) 39
- Mukherjee, B., Mass stopping powers of protons up to 200 MeV in some biologically important materials (*Letter to the Editor*) . . . . . 211 (1983) 235
- Mukherjee, I., see Mukherjee, P. . . . . 219 (1984) 253
- Mukherjee, P., C. Samanta and I. Mukherjee, Determination of L capture probability from L X-ray–gamma ray summing in a gamma-X detector (*Letter to the Editor*) . . . . . 219 (1984) 253
- Mukoyama, T. and L. Sarkadi, Helium-induced L-shell ionization cross sections . . . . . 211 (1983) 525
- Mulera, T., see Perez-Mendez . . . . . 217 (1983) 255
- Mulera, T., see Hirayama . . . . . 220 (1984) 327
- Müller, E., see Klein . . . . . 220 (1984) 200
- Müller, H., see Albanese . . . . . 212 (1983) 111
- Müller, M., Investigation of radiation induced defect impurity complexes in aluminium alloys by channeling. A critical analysis by computer simulation . . . . . 213 (1983) 453



- Müller, M., see Vankov . . . . . 214 (1983) 395
- Müller, R. and H.D. Carstanjen, Determination of the displacement field of hydrogen (deuterium) in tantalum by fast ion channeling . . . . . 218 (1983) 75
- Mulli  , J., see Mangeot . . . . . 216 (1983) 79
- Mullie, J., see Adams . . . . . 217 (1983) 237
- Muntoni, C., see Bressani . . . . . 211 (1983) 231
- M  nzer, H., see Korschinek . . . . . 220 (1984) 82
- M  nzer, H., see Assmann . . . . . 220 (1984) 86
- Murtas, G.P., see Battistoni . . . . . 219 (1984) 300
- Musa, A. and J.P. Ponpon, Contacts on chemically etched CdTe  $\gamma$ -ray detectors . . . . . 216 (1983) 259
- Musket, R.G., Applications of simultaneous ion backscattering and ion-induced X-ray emission . . . . . 218 (1983) 420
- Musser, J.A., see Stevenson . . . . . 213 (1983) 285
- Myers, R.M., see Ayre . . . . . 220 (1984) 549
- Myers, S., Simulation of the beam–beam effect for  $e^+e^-$ -storage rings . . . . . 211 (1983) 263
- Mylon, K.R.D. and G.W. McBeth, Radioactive decay viewed through an extending dead time . . . . . 217 (1983) 459
- Mysnik, A.I., see Frolov . . . . . 216 (1983) 93
- Nacasch, R., see D’Agostini . . . . . 219 (1984) 495
- Nagai, S., see Shima . . . . . 217 (1983) 515
- Nagai, T., see Takeuchi . . . . . 215 (1983) 199
- Nagata, S., see Yamaguchi . . . . . 218 (1983) 598
- Nagayama, K., see Fujita . . . . . 217 (1983) 441
- Nagayama, K., see Koori . . . . . 220 (1984) 453
- Nagle, D.E., see Bowman . . . . . 216 (1983) 399
- Nagovizin, V., see Danilov . . . . . 217 (1983) 153
- Nagpaul, K.K., see Chakravarti . . . . . 214 (1983) 519
- Nagy, E., see Albanese . . . . . 212 (1983) 111
- Nagy, S., see Chepigin . . . . . 220 (1984) 419
- Nail, T.W., see Becker . . . . . 211 (1983) 379
- Nakajima, Y., see Tsubone . . . . . 215 (1983) 171
- Nakamura, K., see Fujii . . . . . 215 (1983) 357
- Nakamura, K., see Tanimori . . . . . 216 (1983) 57
- Nakamura, M., H. Sakaguchi, H. Sakamoto, H. Ogawa, O. Cynshi, S. Kobayashi, S. Kato, N. Matsuoka, K. Hatanaka and T. Noro, Facility for the measurement of proton polarization in the range 50–70 MeV . . . . . 212 (1983) 173
- Nakamura, S., see Arai . . . . . 214 (1983) 209
- Nakamura, S., see Arai . . . . . 217 (1983) 181
- Nakamura, T., see Adams . . . . . 217 (1983) 237
- Nakamura, T.S., see Tanimori . . . . . 216 (1983) 57
- Nakano, I., see Abe . . . . . 220 (1984) 293
- Nakata, K., see Iida . . . . . 212 (1983) 413
- Napolitano, J., see Freedman . . . . . 215 (1983) 71
- Nappi, E., see De Palma . . . . . 219 (1984) 87
- Naramoto, H., see Fujino . . . . . 218 (1983) 691
- Narayan Reddy, P., see Yadagiri Reddy . . . . . 213 (1983) 381
- Naruse, Y. and M. Sekimura, Silicon X-ray sensors with modified electrode structures . . . . . 215 (1983) 213
- Nassalski, J., see Albanese . . . . . 212 (1983) 111
- Natake, T., see Takiue . . . . . 219 (1984) 192
- Naumov, N.I., see Cerri . . . . . 214 (1983) 217
- Navarria, F.-L.,   . Zupan  i   and J. Feltesse, Compensation of errors by cross-calibration of incoming and scattered energies in deep-inelastic lepton scattering . . . . . 212 (1983) 125
- Navin  ek, B., see Simons . . . . . 218 (1983) 585
- N  methy, P., P.J. Oddone, N. Toge and A. Ishibashi, Gated time projection chamber . . . . . 212 (1983) 273
- Ne  as, V., see Kr  mer . . . . . 220 (1984) 123
- Negri, P., see Battistoni . . . . . 219 (1984) 300
- Neidel, H.-O., H. Henschel, H. Geissel and Y. Laichter, Plasma delay of  $^{238}\text{U}$  ions in surface barrier detectors . . . . . 212 (1983) 299
- Nelson, C., see Chandlee . . . . . 215 (1983) 369
- Nelson, C., J. Biel, T. Droege, A. Jonckheere, P. Koehler, D. Berg, C. Chandlee, S. Cihangir, T. Ferbel, J. Hutson, T. Jensen, J. LeBritton, F. Lobkowicz, M. McLaughlin, T. Ohshima, P. Slattery, P. Thompson, C. Bromberg, S.R.W. Cooper, B. Collick, S. Heppelmann, Y. Makdisi, M. Marshak, E. Peterson, J. Povlis, K. Ruddick, B. Brown, D. Garelick, G. Glass, M. Glaubman, S.R. Han and E. Pothier, Operational performance of a large liquid argon photon calorimeter . . . . . 216 (1983) 381

Nelson, D.E., see Southon	219 (1984) 435
Nelson, G., see Eisler	214 (1983) 421
Nelson, J.A., see Cottman	220 (1984) 512
Nelson, W.R., T.M. Jenkins, G.R. Stevenson, M. Nielsen, E.H.M. Heijne, P. Jarron, J. Lord and S. Anderson, Transport of high energy muons in a soil shield	215 (1983) 385
Nelson, W.R., see Perez-Mendez	217 (1983) 89
Nelson, W.R., see Perez-Mendez	217 (1983) 255
Nelson, W.R., see Hirayama	220 (1984) 327
Nemethy, P., see Aihara	217 (1983) 259
Neskakis, A., see Lieder	220 (1984) 363
Netushil, T., see Abdushukurov	217 (1983) 101
Neugebauer, E., see Belau	214 (1983) 253
Neugebauer, E., see Belau	217 (1983) 224
Nguyen Ngoc, H., see Mine	211 (1983) 561
Nguyen-Ngoc, H., see Ahmad	217 (1983) 169
Nicolai, J., see Perez Ferreira	220 (1984) 37
Nicolai, J., see Fazzini	220 (1984) 144
Nicolau, Y.F., Technology of high-purity HgI <sub>2</sub>	213 (1983) 13
Nicolet, M.-A., see Lien	213 (1983) 463
Nicoletti, G., see Battistoni	217 (1983) 429
Nicoletti, G., see Battistoni	217 (1983) 433
Nicoletti, G., see Battistoni	219 (1984) 300
Niebergall, F., see Jonker	215 (1983) 361
Niedra, J.M., See Daehnick	220 (1984) 377
Niehus, H., Low energy ion scattering for the determination of the locations of surface atoms	218 (1983) 230
Nielsen, B.B., see Besenbacher	218 (1983) 551
Nielsen, M., see Nelson	215 (1983) 385
Nielsen, M.C., see Stevenson	216 (1983) 99
Nielsen, S.K., see Böttiger	218 (1983) 684
Nigam, A.K., see Rajan	219 (1984) 565
Nigmanov, T.S., see Filatova	211 (1983) 353
Nigmanov, T.S., see Filatova	215 (1983) 135
Niimura, N., K. Yamada, T. Kubota, A. Matsumoto and S. Hoshino, Position sensitive neutron detectors using <sup>6</sup> Li-glass scintillators and fibre optic encoding	211 (1983) 203
Nikitin, S.A., E.L. Saldin and M.V. Yurkov, Calculation of the depolarizing effect of the field imperfections in electron-positron storage rings	216 (1983) 317
Nikkinen, L., see Lone	214 (1983) 333
Nilsen, Y.V., see Filatova	211 (1983) 353
Nilson, J.A., see Swanson	218 (1983) 643
Nilsson, L.R., see Wender	220 (1984) 371
Ninane, A., see Bol	214 (1983) 169
Nishimura, H., see Asaoka	215 (1983) 493
Nisimura, K., see Hatanaka	217 (1983) 397
Nissenbaum, J., I. Shilo, A. Burger, A. Levi, M. Schieber, L. Keller and C.N.J. Wagner, Nuclear response and phase transformation of melt grown, SbI <sub>3</sub> -doped HgI <sub>2</sub>	213 (1983) 27
Nissenbaum, J., see Levi	213 (1983) 35
Nobiling, R., High energy ion microprobes	218 (1983) 197
Noblet, A., see Bauwens	216 (1983) 349
Nodulman, L., see Kamon	213 (1983) 261
Noguchi, M., see Minemura	219 (1984) 472
Nojiri, Y., see Asahi	220 (1984) 389
Nölscher, C., K. Brenner, R. Knauf and W. Schmidt, Elastic recoil detection analysis of light particles ( <sup>1</sup> H– <sup>16</sup> O) using 30 MeV sulphur ions	218 (1983) 116
Noma, H., F.T. Avignone, III, D.M. Moltz and K.S. Toth, A Monte Carlo study of the response of a germanium detector to electrons and positrons	211 (1983) 391
Noppe, J.M., see Albanese	212 (1983) 111
Norbeck, E. and M.D. Strathman, Poly-C Van de Graaff belts	215 (1983) 7
Nordberg, E., see Andrews	211 (1983) 47
Norlin, L.O., see Tedeschi	214 (1983) 509
Noro, T., see Nakamura	212 (1983) 173
Norton, P.R., see Albanese	212 (1983) 111

- Norton, P.R., see MacDonald . . . . . 218 (1983) 765
- Notermans, G.H.J., R.G. Smeenk and J.F.M. Westendorp, The energy straggling of protons in thin carbon foils . . . . . 215 (1983) 555
- Nowicki, L.J., see Marcuso . . . . . 211 (1983) 227
- Numao, T., see Hargrove . . . . . 219 (1984) 461
- Nurushev, S.B., see Frolov . . . . . 216 (1983) 93
- Nygren, D.R., see Aihara . . . . . 217 (1983) 259
- Nylandsted Larsen, A., G. Bortels and B. Denecke, Satellite peaks in high-resolution alpha-particle spectra of decay-chain members measured with silicon surface-barrier detectors . . . . . 219 (1984) 339
- Obenhuber, Th., A. Forster, W. Potzel and G.M. Kalvius, A microprocessor controlled spectrometer for frequency modulation Mössbauer measurements . . . . . 214 (1983) 361
- Oberlin, J.C., see Letournel . . . . . 220 (1984) 10
- Obermann, W., see Paul . . . . . 214 (1983) 15
- Obermann, W., see Semrad . . . . . 218 (1983) 811
- O'Brien, K. and R. Sanna, Reply to Chambless and Broadway (*Letter to the Editor*) . . . . . 214 (1983) 547
- Ocone, R., see De Felice . . . . . 212 (1983) 359
- O'Connor, D.J., see Garrett . . . . . 218 (1983) 333
- O'Connor, J.P., P.G. Blauner and R.A. Weller, Energy and mass analysis of secondary ions sputtered from metallic targets by MeV heavy ions . . . . . 218 (1983) 293
- Oda, S., see Koori . . . . . 220 (1984) 453
- Oddone, P.J., see Némethy . . . . . 212 (1983) 273
- Oddone, P.J., see Aihara . . . . . 217 (1983) 259
- Odru, R., see Moszyński . . . . . 217 (1983) 453
- Oed, A., P. Geltenbort, R. Brissot, F. Gönnerwein, P. Perrin, E. Aker and D. Engelhardt, A mass spectrometer for fission fragments based on time-of-flight energy measurements . . . . . 219 (1984) 569
- Oexner, M., see Klages . . . . . 219 (1984) 269
- Ogawa, H., see Nakamura . . . . . 212 (1983) 173
- Ogawa, K., see Arai . . . . . 214 (1983) 209
- Ogawa, M., see Kokame . . . . . 213 (1983) 317
- Ogawa, M., T. Matsuzaki, Y. Ozawa and E. Arai, A simple beam-energy homogenizer and automatic measurement of excitation functions . . . . . 215 (1983) 167
- Ohfuji, T., see Inada . . . . . 218 (1983) 607
- Ohkuma, J. and M. Kawanishi, Anomalous current in a parallel plate secondary electron monitor (*Letter to the Editor*) . . . . . 211 (1983) 547
- Ohshima, T., see Chandlee . . . . . 215 (1983) 369
- Ohshima, T., see Nelson . . . . . 216 (1983) 381
- Ohtani, S., see Takagi . . . . . 213 (1983) 539
- Ohtani, S., see Takagi . . . . . 215 (1983) 207
- Okada, S., see Oura . . . . . 218 (1983) 253
- Okazaki, A., see Lone . . . . . 214 (1983) 333
- Okudaira, K., see Yoshimori . . . . . 215 (1983) 255
- Okuno, K., see Takagi . . . . . 215 (1983) 207
- Olejniczak, W., see Bogorodski . . . . . 217 (1983) 149
- Oliver, J., see Blocker . . . . . 216 (1983) 71
- Olivier, P., see Benichou . . . . . 214 (1983) 245
- Olsen, D.K., see Coceva . . . . . 211 (1983) 459
- Olsen, L., see Carosi . . . . . 219 (1984) 311
- Olsen, S.L., see Andrews . . . . . 211 (1983) 47
- Olson, R.E., Angular scattering in ion–atom collisions at intermediate energies . . . . . 214 (1983) 103
- Omaly, J., M. Robert, P. Brisson and R. Cadoret, Mass transport, nucleation and monocrystal growth of  $\text{HgI}_2$  with the forced flux method . . . . . 213 (1983) 19
- Omata, K., see Kokame . . . . . 213 (1983) 317
- O'Neill, L.H., R.L. Ford, E.B. Hughes, E. Hilger, J.W. Simpson and L.K. Resvanis, A precision luminosity monitor for electron–positron storage rings . . . . . 216 (1983) 361
- Onel, Y., see Aprile-Giboni . . . . . 215 (1983) 147
- Onoda, H., see Inada . . . . . 218 (1983) 607
- Ooi, S.L., see Eastham . . . . . 220 (1984) 90
- Oommen, I.K., see Mehta . . . . . 213 (1983) 393
- Ophel, T.R., see England . . . . . 214 (1983) 305
- Ophel, T.R., D.C. Weissner, A. Cooper, L.K. Fifield and G.D. Putt, Aspects of breakdown product contamination of sulphur hexafluoride in electrostatic accelerators . . . . . 217 (1983) 383



- O'Prey, D.G., see Blunden . . . . . 216 (1983) 191
- Orava, R., see Adams . . . . . 217 (1983) 237
- Orito, S., T. Kobayashi and H. Takeda, Dense lead glass shower counters at high energies . . . . . 215 (1983) 93
- Orito, S., T. Kobayashi, K. Suzuki, M. Ito and A. Sawaki, New proximity focusing photomultiplier resistant to high magnetic field . . . . . 216 (1983) 439
- Oropesa, J., see Anders . . . . . 219 (1984) 66
- Orr, R.S., see Abt . . . . . 217 (1983) 377
- Ortale, C., see Becchetti . . . . . 213 (1983) 127
- Ortiz, L., see Flores . . . . . 212 (1983) 375
- Osborne, A.M., see Albanese . . . . . 212 (1983) 111
- Osbourn, G.C., see Picraux . . . . . 218 (1983) 57
- Osbourn, G.C., see Chu . . . . . 218 (1983) 81
- Oshikubo, T., see Kokame . . . . . 213 (1983) 317
- Oshima, C., see Aono . . . . . 218 (1983) 241
- Östling, M., C.S. Petersson and G. Possnert, The  $^{12}\text{C}(\alpha, \alpha)^{12}\text{C}$  nuclear resonance at 4.26 MeV and its application in RBS analysis of carbon content in thin films . . . . . 218 (1983) 439
- Osvay, M., see Ranogajec-Komor . . . . . 212 (1983) 383
- Ott, W., see Krämer . . . . . 220 (1984) 123
- Ouchene, M., see Visocekas . . . . . 214 (1983) 553
- Oura, K., Y. Yabuuchi, F. Shoji, T. Hanawa and S. Okada, Low energy ion scattering study of palladium films on silicon (111)- $7 \times 7$  surfaces . . . . . 218 (1983) 253
- Outlaw, D.A., see Westerfeldt . . . . . 219 (1984) 284
- Ovadai, E., see Eisen . . . . . 211 (1983) 171
- Overley, J.C., see Lefevre . . . . . 218 (1983) 39
- Overley, J.C., R.C. Connolly, G.E. Sieger, J.D. MacDonald and H.W. Lefevre, Energy-loss radiography with a scanning MeV-ion microprobe . . . . . 218 (1983) 43
- Oyedele, J.A., The bias in on-line thickness calibration by radiation transmission . . . . . 217 (1983) 507
- Ozaki, S., see Eiseman . . . . . 217 (1983) 140
- Ozawa, K., see Fujino . . . . . 218 (1983) 691
- Ozawa, Y., see Ogawa . . . . . 215 (1983) 167
- Paciesas, W., R. Baker, D. Boclet, S. Brown, T. Cline, H. Costlow, Ph. Durouchoux, C. Ehrmann, N. Gehrels, J.M. Hameury, R. Haymes, B. Teegarden and J. Tueller, A balloon-borne instrument for high-resolution astrophysical spectroscopy in the 20–8000 keV energy range . . . . . 215 (1983) 261
- Padgett, L., see Ortale . . . . . 213 (1983) 95
- Paine, B.M., see Scott . . . . . 218 (1983) 154
- Pairsuwan, W., see Madey . . . . . 214 (1983) 401
- Pairsuwan, W., see Watson . . . . . 215 (1983) 413
- Pal, D., see Thomas . . . . . 211 (1983) 511
- Palchik, V.V., see Filatova . . . . . 211 (1983) 353
- Palladino, V. and D.B. Smith, Study of a method for the resolution of left–right ambiguities in drift chambers . . . . . 212 (1983) 163
- Palmer, G.R., see MacArthur . . . . . 218 (1983) 519
- Paltemaa, R., J. Räisänen, M. Hautala and A. Anttila, Ranges of some 20–100 keV light ions in Si and Ge . . . . . 218 (1983) 785
- Pambrun, C., see Baubillier . . . . . 217 (1983) 205
- Panev, G.A., see Agamalyan . . . . . 213 (1983) 489
- Panfil, S.L., see Ginzburg . . . . . 219 (1984) 5
- Pang, W., see Lindblad . . . . . 215 (1983) 183
- Panman, J., see Bénichou . . . . . 217 (1983) 163
- Panman, J., see Abt . . . . . 217 (1983) 377
- Panvini, P.S., see Andrews . . . . . 211 (1983) 47
- Panvini, R., see Ehrlich . . . . . 211 (1983) 17
- Panyushkin, V.A., see Exnerova . . . . . 217 (1983) 425
- Paradellis, T., see Vourvopoulos . . . . . 220 (1984) 23
- Paramesh, L., see Sanjeeviah . . . . . 216 (1983) 231
- Pardo, R., see Kutschera . . . . . 220 (1984) 118
- Parekh, P.P., see Mirzadeh . . . . . 216 (1983) 149
- Park, D., see Aihara . . . . . 217 (1983) 259
- Parker, P., see Thomas . . . . . 211 (1983) 511
- Parker, R.R., see Fisher . . . . . 219 (1984) 179
- Pascaud, C., see Albanese . . . . . 212 (1983) 111

- Pastor, C., F. Benrachi, B. Chambon, D. Drain, A. Dauchy, A. Giorni and C. Morand, Detection of charged particles with a phoswich counter . . . . . 212 (1983) 209
- Paterson, C.N., see Bussey . . . . . 211 (1983) 301
- Patriarca, R., see Bazzano . . . . . 214 (1983) 481
- Patriarca, R., see Ubertini . . . . . 217 (1983) 97
- Patronis, E.T., see Lewis . . . . . 211 (1983) 371
- Pattyn, H., see Wu . . . . . 218 (1983) 652
- Patz, N., see Blocker . . . . . 216 (1983) 71
- Paul, H., see Campbell . . . . . 212 (1983) 427
- Paul, H. and W. Obermann, Reference cross sections for K-shell ionization by light ions . . . . . 214 (1983) 15
- Paul, L., see Albanese . . . . . 212 (1983) 111
- Paul, W., see Dörschel . . . . . 216 (1983) 227
- Pauli, G., see Cernigoi . . . . . 211 (1983) 129
- Paulot, C., see Dudelzak . . . . . 217 (1983) 208
- Pavlopoulos, P., see Blüm . . . . . 213 (1983) 251
- Pavlopoulos, P., see Suffert . . . . . 215 (1983) 107
- Payre, P., see Albanese . . . . . 212 (1983) 111
- Payre, P., see D'Agostini . . . . . 219 (1984) 495
- Peacock, A., see Sims . . . . . 211 (1983) 499
- Pearson, J.F., see Fraser . . . . . 219 (1984) 199
- Pedrazzini, G.J., see Maurer . . . . . 214 (1983) 117
- Peelle, R.W. and R.R. Spencer, Counting anticoincidences to reduce statistical uncertainty in the calibration of a multiplicity detector . . . . . 211 (1983) 167
- Peigneux, J.P., see Binon . . . . . 214 (1983) 269
- Peisert, A., see Mangeot . . . . . 216 (1983) 79
- Peisert, A., The parallel plate avalanche chamber as an endcap detector for time projection chambers . . . . . 217 (1983) 229
- Peisert, A., see Adams . . . . . 217 (1983) 237
- Pella, P.J., see Madey . . . . . 214 (1983) 401
- Pellin, M.J., D.M. Gruen, C.E. Young and M.D. Wiggins, Electronic excitation of Ti atoms sputtered by energetic  $\text{Ar}^+$  and  $\text{He}^+$  from clean and monolayer oxygen covered surfaces . . . . . 218 (1983) 771
- Pelzer, W., see Busse . . . . . 220 (1984) 26
- Pennisi, A.R., see Faraci . . . . . 212 (1983) 307
- Pennisi, A.R., see Faraci . . . . . 216 (1983) 531
- Penselin, S., see Mathews . . . . . 213 (1983) 155
- Penzo, A., see Azaiez . . . . . 211 (1983) 335
- Perchiazzi, M., see De Marzo . . . . . 217 (1983) 405
- Perchonok, R., see Andrews . . . . . 211 (1983) 47
- Perego, A., see Fazzini . . . . . 211 (1983) 125
- Perez Ferreira, E., E. Achterberg, D. Camin, A. Ceballos, N. Fazzini, A. Filevich, H. Gonzalez, A. Jech, M.A.J. Mariscotti, J. Milberg, J. Nicolai, R. Requejo, R. Ribarich, J.J. Rossi, S. Tau, A. Tersigni, J. Testoni and E. Ventura, The Buenos Aires tandem accelerator facility . . . . . 220 (1984) 37
- Perez-Mendez, V., G. Schwartz, W.R. Nelson, R. Bellazzini, A. Del Guerra, M.M. Massai and G. Spandre, Further improvements in the design of a positron camera with dense drift space MWPCs . . . . . 217 (1983) 89
- Perez-Mendez, V., A. Del Guerra, T. Mulera, H. Hirayama and W.R. Nelson, Design of a lead glass drift calorimeter with MWPC detection . . . . . 217 (1983) 255
- Perez-Mendez, V., see Hirayama . . . . . 220 (1984) 327
- Periale, L., see Battistoni . . . . . 219 (1984) 300
- Peroni, C., see Albanese . . . . . 212 (1983) 111
- Perotti, F., see Ubertini . . . . . 217 (1983) 97
- Perret-Gallix, D., see Azaiez . . . . . 211 (1983) 335
- Perrin, C., see Aurouet . . . . . 211 (1983) 309
- Perrin, M., see Lecoq . . . . . 213 (1983) 329
- Perrin, P., see Oed . . . . . 219 (1984) 569
- Perrot, G., see Albanese . . . . . 212 (1983) 111
- Peshekhonov, V.D., see Abdushukurov . . . . . 217 (1983) 101
- Peskov, V.D., see Karabadzhak . . . . . 217 (1983) 56
- Pessard, H., see Albanese . . . . . 212 (1983) 111
- Peters, W., see Langkau . . . . . 216 (1983) 19
- Petersen, W., see Tolkiehn . . . . . 215 (1983) 515
- Peterson, E., see Chandlee . . . . . 215 (1983) 369
- Peterson, E., see Nelson . . . . . 216 (1983) 381

Petersson, C.S., see Östling	218 (1983) 439
Petiau, P., see Brisson	215 (1983) 79
Petit, J.-C., see Della Mea	218 (1983) 493
Petrera, S., see Baroni	214 (1983) 381
Petrillo, L. and M. Severi, A possible improvement in the measurement of the ratio of particle velocity to the velocity of light	219 (1984) 176
Pettingale, J., see Albanese	212 (1983) 111
Petukhov, Yu. P., see Barabash	211 (1983) 331
Pevsner, A., see Aihara	217 (1983) 259
Pfaff, E., see Baumgart	215 (1983) 319
Pfeiffer, W., Breakdown mechanism and time development of discharges in compressed insulating gases	220 (1984) 63
Pfestorf, W., see Matthes	220 (1984) 112
Pfützner, F., see Dörschel	216 (1983) 227
Picchi, P., see Battistoni	217 (1983) 429
Picchi, P., see Battistoni	217 (1983) 433
Picchi, P., see Battistoni	219 (1984) 300
Piccinini, M., see Capponi	217 (1983) 465
Pickering, H.W., see Loxton	218 (1983) 340
Picraux, S.T., L.R. Dawson, G.C. Osbourn and W.K. Chu, Axial channeling studies of strained-layer superlattices	218 (1983) 57
Picraux, S.T., see Chu	218 (1983) 81
Pierazzini, G., see Carosi	219 (1984) 311
Pijlgroms, B.J., see Anders	215 (1983) 377
Pillin, M., see Bizzarri	215 (1983) 511
Pimental, I.R., see Jesus	214 (1983) 29
Pipkin, F.M., see Andrews	211 (1983) 47
Pisharody, M., see Wang	218 (1983) 669
Piskoř, S., see Franc	211 (1983) 159
Pitkänen, V., see Vänskä	213 (1983) 343
Plaag, R., see Adams	217 (1983) 237
Platner, E.D., see Eiseman	217 (1983) 140
Platonov, V.G., see Vovenko	212 (1983) 155
Plattner, H., see Davies	218 (1983) 141
Plischke, P., see Klages	219 (1984) 269
Plunkett, R., see Andrews	211 (1983) 47
Pocar, F., see Herold	217 (1983) 277
Podini, P., see Tedeschi	214 (1983) 509
Podolyak, E.R., see Karabadzhak	217 (1983) 56
Poelsma, B., see Koeleman	218 (1983) 225
Pogany, A.P., see Rossiter	218 (1983) 639
Poggi, G., see Bini	212 (1983) 235
Poitou, J., Pattern recognition program for the pictorial drift chamber Diogene	217 (1983) 373
Polakos, P., see Fent	211 (1983) 315
Polakos, P., see De Marzo	217 (1983) 405
Polcaro, F., see Bazzano	214 (1983) 481
Polcaro, V.F., see Ubertini	217 (1983) 97
Poli, M., see Capponi	217 (1983) 465
Policarpo, A.J.P.L., see Ribeirete	214 (1983) 561
Policarpo, A.J.P.L., see Alegria Feio	217 (1983) 473
Polikanov, S., see Breskin	217 (1983) 131
Poling, R., see Andrews	211 (1983) 47
Polli, E., see Capitani	216 (1983) 307
Polovnikov, S.A., see Cerri	214 (1983) 217
Polyakov, V.V., see Kiselev	220 (1984) 399
Polychronakos, V.A., see Eiseman	217 (1983) 140
Ponpon, J.P., see Musa	216 (1983) 259
Pontecorvo, G.B., see Exnerova	217 (1983) 425
Porter, N.A., see Fegan	211 (1983) 179
Posa, F., see De Marzo	217 (1983) 405
Possnert, G., see Östling	218 (1983) 439



- Postma, H., J.P. Boogaard, P.H.M. Keizer, L. Prins and K.P.A. De Witt Huberts, A high power liquid  $^3\text{He}$  target system for electron scattering experiments . . . . . 219 (1984) 292
- Poth, H., see Blüm . . . . . 213 (1983) 251
- Pothier, E., see Nelson . . . . . 216 (1983) 381
- Pothier, J., see Benichou . . . . . 214 (1983) 245
- Pötsch, M., see Albanese . . . . . 212 (1983) 111
- Potter, D., see Andrews . . . . . 211 (1983) 47
- Pottier, J., see Dei-Cas . . . . . 220 (1984) 165
- Potts, P.J. and T. Twomey, Variation in fwhm of gamma photopeak resolution with sample composition during neutron activation analysis using a low-energy photon spectrometer (*Letter to the Editor*) . . . . . 219 (1984) 601
- Potylitsin, A.P., see Golovkov . . . . . 212 (1983) 167
- Potzel, W., see Obenhuber . . . . . 214 (1983) 361
- Poucher, J., see Ehrlich . . . . . 211 (1983) 17
- Poucher, J.S., see Andrews . . . . . 211 (1983) 47
- Pouliot, J., see Côté . . . . . 219 (1984) 456
- Pountney, J., see Bentley . . . . . 218 (1983) 555
- Poutissou, J.M., see Hargrove . . . . . 219 (1984) 461
- Pouttissou, R., see Hargrove . . . . . 219 (1984) 461
- Poux, J., see Ballon . . . . . 217 (1983) 213
- Pouyat, F., see Bjelkhagen . . . . . 220 (1984) 300
- Povlis, J., see Nelson . . . . . 216 (1983) 381
- Powell, P.S., see Eastham . . . . . 220 (1984) 90
- Powers, R.J., see Bertl . . . . . 217 (1983) 367
- Pöyry, H., Effects of finite chopper thickness in correlation time-of-flight spectrometry of thermal neutrons . . . . . 215 (1983) 235
- Pregernig, L., see Manarin . . . . . 217 (1983) 335
- Preissner, H., see Albanese . . . . . 212 (1983) 111
- Prestwich, W.V., see Kennett . . . . . 215 (1983) 159
- Prestwich, W.V., see Tervo . . . . . 216 (1983) 205
- Prete, G., see Fabris . . . . . 216 (1983) 167
- Pretzl, K.P., see Fent . . . . . 211 (1983) 315
- Pretzl, K.P., see De Marzo . . . . . 217 (1983) 405
- Price, H.G., see Aitken . . . . . 220 (1984) 149
- Price, M., see Battistoni . . . . . 219 (1984) 300
- Prins, J.F., see Sellschop . . . . . 218 (1983) 593
- Prins, J.F., see Friedland . . . . . 218 (1983) 658
- Prins, L., see Postma . . . . . 219 (1984) 292
- Pripstein, M., see Aihara . . . . . 217 (1983) 259
- Pritchard, T.W., see Albrow . . . . . 214 (1983) 201
- Proch, D., see Bauer . . . . . 214 (1983) 189
- Prokoshkin, Yu.D., see Binon . . . . . 214 (1983) 269
- Prokoshkin, Yu.D., see Inyakin . . . . . 215 (1983) 103
- Pronko, P.P., see Bhattacharya . . . . . 218 (1983) 515
- Puliti, P., see Melone . . . . . 214 (1983) 459
- Pullia, A., see Battistoni . . . . . 219 (1984) 300
- Putt, G.D., see Ophel . . . . . 217 (1983) 383
- Puumalainen, P. and P. Sikanen, Application of coincidence techniques to X-ray fluorescence analysis . . . . . 212 (1983) 463
- Puumalainen, P., see Sikanen . . . . . 212 (1983) 469
- Qiong, L., see Eichinger . . . . . 218 (1983) 489
- Quenneville, A.F., see Swanson . . . . . 218 (1983) 643
- Quenneville, A.F., see Howe . . . . . 218 (1983) 663
- Quidort, J., see Comby . . . . . 217 (1983) 345
- Rabalais, J.W., J.A. Schultz and R. Kumar, Surface analysis using scattered primary and recoiled secondary neutrals and ions by TOF and ESA techniques . . . . . 218 (1983) 719
- Rabany, M., see Manarin . . . . . 217 (1983) 335
- Rabler, A., see Semrad . . . . . 215 (1983) 549
- Radeka, V., see Gatti . . . . . 220 (1984) 445
- Raffnsoe, R.C., see Stevenson . . . . . 216 (1983) 99
- Ragazzi, S., see Battistoni . . . . . 219 (1984) 300
- Ragusa, F., see Amendolia . . . . . 217 (1983) 317

Raich, U., see Blüm	213 (1983) 251
Raine, C., see Bussey	211 (1983) 301
Raine, C., K.W.D. Ledingham and K.M. Smith, Laser induced ionisation in proportional counters	217 (1983) 305
Rains, R.G., see Sobottka	220 (1984) 575
Räisänen, J., see Lappalainen	212 (1983) 441
Räisänen, J., see Paltemaa	218 (1983) 785
Raisbeck, G.M., see Middleton	218 (1983) 430
Rajan, N. and A.K. Nigam, Measurement of the electronic absorptioin coefficient for $^{57}\text{Co}$ 14.4 keV gamma photons in aluminium using the Mössbauer effect as a monochromator	219 (1984) 565
Ramírez-Jiménez, F.J., see Jiménez-Domínguez	219 (1984) 256
Rama Reddy, K., see Yadagiri Reddy	213 (1983) 381
Ramdane, D., see Thomas	218 (1983) 125
Ramström, E. and B. Trostell, A method for the preparation of $^{13}\text{C}$ targets by the cracking procedure ( <i>Letter to the Editor</i> )	219 (1984) 438
Rancoita, P.G., see Borgeaud	211 (1983) 363
Ranieri, A., see De Palma	216 (1983) 393
Ranieri, A., see De Palma	217 (1983) 135
Ranieri, A., see De Marzo	217 (1983) 405
Ranieri, A., see De Palma	219 (1984) 87
Ranogajec-Komor, M., M. Osvay, I. Dvornik and T. Biró, Fast neutron detection with $\text{Al}_2\text{O}_3$ thermoluminescence dosimeter	212 (1983) 383
Ransome, R.D., see Hollas	219 (1984) 275
Rapin, D., see Aprile-Giboni	215 (1983) 147
Rasuvaev, E.A., see Cerri	214 (1983) 217
Ratzek, R., see Drexler	220 (1984) 409
Raut, V., see Lone	214 (1983) 333
Ravon, J.P., Etalonnage d'un channeltron en vue de son application à la spectrométrie de masse	211 (1983) 7
Raymond, R.S., see Becchetti	213 (1983) 127
Reading, D.H., see Eaton	214 (1983) 151
Reading, J.F., see Becker	214 (1983) 49
Rebak, M., see Sellschop	218 (1983) 593
Rebel, H., see Faust	213 (1983) 277
Recknagel, E., see Wichert	218 (1983) 633
Reed, D.A. and J.E. Baker, Use of ISS and doubly charged secondary ions to monitor surface composition during SIMS analysis	218 (1983) 324
Reeves, G.A., see Veaser	215 (1983) 529
Regan, T., A sensitive instrument for measuring wire tension in multiwire proportional and drift chambers	219 (1984) 100
Regimbart, R., see Louvel	211 (1983) 535
Rehak, P., Proposal for a semiconductor high resolution tracking detector	211 (1983) 323
Rehm, K.E., see Kutschera	220 (1984) 118
Reimann, C.T., see Boring	218 (1983) 707
Reiter, G., see Baumgart	215 (1983) 319
Rekveldt, M.Th., Bent perfect Si crystals as neutron reflectors	215 (1983) 521
Ren, Y.-H., see Cheng	218 (1983) 601
Renaud, M., see Dei-Cas	220 (1984) 165
Rendić, D., see Blagus	216 (1983) 415
Renner, D., see Busse	220 (1984) 26
Renton, P., see Albanese	212 (1983) 111
Reolon, A.R., see Capitani	216 (1983) 307
Repnow, R., see Ingwersen	215 (1983) 55
Repond, J., see Blüm	213 (1983) 251
Requejo, R., see Perez Ferreira	220 (1984) 37
Requejo, R., see Fazzini	220 (1984) 144
Resvanis, L.K., see O'Neill	216 (1983) 361
Retz, A., see Martin	214 (1983) 281
Reuter, W., Techniques for the compositional and chemical state analysis of surfaces and thin films	218 (1983) 391
Reuter, W., J.C. Gursky, E.B. Shera and M.W. Johnson, Thick osmium targets	220 (1984) 288
Rezvykh, K.A. and V.A. Romanov, A device for increasing the insulating strength of an electrostatic accelerator column	216 (1983) 11
Rhode, J.I. and G. Gleason, Application of a Ge(Li) gamma detector-cadmium radiator arrangement for low level neutron flux measurements	219 (1984) 406

- Riabtsov, V.D., see Filatova . . . . . 211 (1983) 353
- Riabtsov, V.D., see Filatova . . . . . 215 (1983) 135
- Ribarich, R., see Perez Ferreira . . . . . 220 (1984) 37
- Ribarics, P., see Albanese . . . . . 212 (1983) 111
- Ribeirete, M.M.F., A.J.P.L. Policarpo, M. Salete S.C.P. Leite, M.A.F. Alves and E.P. De Lima, Fano factors of krypton–xenon mixtures (*Letter to the Editor*) . . . . . 214 (1983) 561
- Ribrag, M., see Mazur . . . . . 212 (1983) 203
- Ricci, R.A., see Signorini . . . . . 220 (1984) 30
- Ricco, G., see Taiuti . . . . . 211 (1983) 135
- Ricco, G. see Capitani . . . . . 216 (1983) 307
- Richards, G., see Southon . . . . . 219 (1984) 435
- Richardson, E.G., see Jones . . . . . 220 (1984) 1
- Richstein, J., see Amendolia . . . . . 217 (1983) 317
- Richter, B., see Blüm . . . . . 213 (1983) 251
- Ricker, G.R., see Vallerga . . . . . 213 (1983) 145
- Riechert, H., see Meyer . . . . . 215 (1983) 65
- Ries, H., see Drexler . . . . . 220 (1984) 409
- Riesebehl, M., see Belau . . . . . 214 (1983) 253
- Rikner, G., E. Grusell, V. Kostjuchenko, V. Lukjashin and M. Lomanov, Radiation damage and dose rate linearity response of a p-Si detector in 70 MeV protons . . . . . 217 (1983) 501
- Riley, P.J., see Hollas . . . . . 219 (1984) 275
- Rindi, A., see De Felice . . . . . 212 (1983) 359
- Ristinen, R.A., see Becchetti . . . . . 213 (1983) 127
- Rith, K., see Albanese . . . . . 212 (1983) 111
- Roach, M., see Lindblad . . . . . 215 (1983) 183
- Roberson, N.R., S.A. Wender and D.M. Drake, The absolute efficiency of a 7.6- by 7.6-cm bismuth germanate scintillator for 15-MeV gamma rays (*Letter to the Editor*) . . . . . 214 (1983) 541
- Roberson, N.R., see Wender . . . . . 220 (1984) 371
- Robert, M., see Omaly . . . . . 213 (1983) 19
- Robrish, P.R., see Aihara . . . . . 217 (1983) 259
- Robson, J.M., see Lone . . . . . 214 (1983) 333
- Rocco, J.C., see Clegg . . . . . 212 (1983) 5
- Roether, W., see Schlosser . . . . . 216 (1983) 155
- Rohlf, J., see Andrews . . . . . 211 (1983) 47
- Röhner, F., see Albanese . . . . . 212 (1983) 111
- Rohrbach, W., see Klein . . . . . 220 (1984) 200
- Rohrer, L., H. Jakob, K. Rudolph and S.J. Skorka, The four gap double drift buncher at Munich . . . . . 220 (1984) 161
- Rohwer, P., H. Baumann, W. Schütze and K. Bethge, Studies of the center potential in a Penning discharge . . . . . 211 (1983) 543
- Rolandi, L., see Amendolia . . . . . 217 (1983) 317
- Rolfs, C., see Vlieks . . . . . 213 (1983) 291
- Rollier, M., see Battistoni . . . . . 219 (1984) 300
- Romano, G., see Baroni . . . . . 214 (1983) 381
- Romanov, V.A., see Revzykh . . . . . 216 (1983) 11
- Römer, J.G.M., see Martin . . . . . 214 (1983) 281
- Ronan, M.T., see Aihara . . . . . 217 (1983) 259
- Rondio, E., see Albanese . . . . . 212 (1983) 111
- Roosen, R., see Benichou . . . . . 214 (1983) 245
- Roosendaal, H.E. and J.B. Sanders, Some properties of the relocation function in ion beam collisional mixing . . . . . 218 (1983) 673
- Root, J.W., see Knickelbein . . . . . 216 (1983) 121
- Rösel, F., see Trautmann . . . . . 214 (1983) 21
- Rosenberg, R.J., see Vänskä . . . . . 213 (1983) 343
- Rosenfeld, C., see Andrews . . . . . 211 (1983) 47
- Roser, H.W., see Sobie . . . . . 219 (1984) 501
- Rosner, B., see Mingay . . . . . 216 (1983) 517
- Ross, R.R., see Aihara . . . . . 217 (1983) 259
- Rossi, J.J., see Perez Ferreira . . . . . 220 (1984) 37
- Rossi, L., see Benso . . . . . 217 (1983) 194
- Rossi-Alvarez, C., see Della Mea . . . . . 218 (1983) 493
- Rossiter, K.G., R.G. Elliman, I.V. Mitchell, A.P. Pogany and J.S. Williams, Dechanneling analysis of disorder in (100) gallium arsenide . . . . . 218 (1983) 639
- Rossner, H., see Lettau . . . . . 213 (1983) 187



- Rosso, E., see Adam . . . . . 217 (1983) 291
- Roth, J., J. Bohdanský and W. Eckstein, Angular distributions and differential sputtering yields of binary compounds as a function of angle of incidence . . . . . 218 (1983) 751
- Rothberg, J., see Adams . . . . . 217 (1983) 237
- Rothman, S.J., see Marcuso . . . . . 211 (1983) 227
- Roubaud, G., see De Felice . . . . . 212 (1983) 359
- Rouse, F.R., see Aihara . . . . . 217 (1983) 259
- Roush, M.L., see Andreadis . . . . . 218 (1983) 747
- Rousseau, M.D., see Albanese . . . . . 212 (1983) 111
- Roussel, P. and J.M. De Coster, Ligne de transfert achromatique à longueur équivalente fortement négative (*Letter to the Editor*) . . . . . 211 (1983) 215
- Routti, J.T., see Aarnio . . . . . 219 (1984) 173
- Roy, D., see Tremblay . . . . . 220 (1984) 270
- Roy, G., see Clegg . . . . . 212 (1983) 5
- Roy, J.-C., L. Breton, J.-E. Côté and J. Turcotte, On the identification of gamma rays from the  $^{232}\text{Th}$  decay . . . . . 215 (1983) 409
- Roy, Ph., see Dudelzak . . . . . 217 (1983) 208
- Roy, R., see Côté . . . . . 219 (1984) 456
- Roy, S.C., see Apfel . . . . . 219 (1984) 582
- Roy, S.C., see Mitra . . . . . 220 (1984) 537
- Ruan, J.-Z., see Yoshizawa . . . . . 212 (1983) 249
- Rubin, H.A., see Brisson . . . . . 215 (1983) 79
- Rucinski, G., see Andrews . . . . . 211 (1983) 47
- Ruddick, K., see Chandlee . . . . . 215 (1983) 369
- Ruddick, K., see Nelson . . . . . 216 (1983) 381
- Rüdenauer, F.G., see Gnaser . . . . . 218 (1983) 303
- Rudolph, K., see Rohrer . . . . . 220 (1984) 161
- Rui, R., see Cernigoi . . . . . 211 (1983) 129
- Rulikowska Zarębski, E., see Dwurażny . . . . . 217 (1983) 301
- Russell, J., see Toki . . . . . 219 (1984) 479
- Rustichelli, F., see Melone . . . . . 214 (1983) 459
- Rutherford, J., see Adams . . . . . 217 (1983) 237
- Ružička, J., see Zrellov . . . . . 215 (1983) 141
- Ryan, T., see Cox . . . . . 219 (1984) 487
- Ryan, T., see Cox . . . . . 219 (1984) 491
- Rychtelski, A., see Bogorodzki . . . . . 217 (1983) 149
- Ryves, T.B., see Christmas . . . . . 215 (1983) 397
- Saavedra, O., see Battistoni . . . . . 219 (1984) 300
- Saban, R., see Manarin . . . . . 217 (1983) 335
- Sabbas, A.M., see Chirovsky . . . . . 219 (1984) 103
- Sack, B., see Binder . . . . . 217 (1983) 285
- Sadoff, A.J., see Andrews . . . . . 211 (1983) 47
- Sadowski, E., see Blocker . . . . . 216 (1983) 71
- Saemann-Ischenko, G. and W. Schmidt, Auger electron emission from solids during bombardment with MeV ions . . . . . 218 (1983) 757
- Safonov, S.A., see Dugar-Zhabon . . . . . 219 (1984) 263
- Sagefka, T., see Martin . . . . . 214 (1983) 281
- Sahre, P., A new method for discriminating  $\beta$ - and  $\gamma$ -doses in thick TL-dosimeters (*Letter to the Editor*) . . . . . 217 (1983) 525
- Sai, F., see Fujii . . . . . 215 (1983) 357
- Saito, R., see Minemura . . . . . 219 (1984) 472
- Saito, T., see Hatanaka . . . . . 217 (1983) 397
- Sakae, T., see Matoba . . . . . 219 (1984) 160
- Sakaguchi, H., see Nakamura . . . . . 212 (1983) 173
- Sakai, I., see Kumada . . . . . 211 (1983) 283
- Sakai, H., see Hatanaka . . . . . 217 (1983) 397
- Sakai, Y., see Adams . . . . . 217 (1983) 237
- Sakamoto, H., see Nakamura . . . . . 212 (1983) 173
- Sakamoto, S., see Fujii . . . . . 215 (1983) 357
- Sakihara, K., see Suzuki . . . . . 211 (1983) 565
- Sakisaka, M., see Tomita . . . . . 213 (1983) 469
- Sakurai, K., Measurement and evaluation of neutron spectra above 0.1 MeV in the JMTR . . . . . 213 (1983) 359

Saldin, E.L., see Nikitin	216 (1983) 317
Saleem, S.M., see Khan	215 (1983) 193
Saete S.C.P. Leite, M., see Ribeirete	214 (1983) 561
Salman, S., see Wang	218 (1983) 669
Samanta, C., see Mukherjee	219 (1984) 253
Sampaio, F.C., see Koide	215 (1983) 61
Sanada, J., Growth of the avalanche along the anode wire in a gas counter – II	212 (1983) 291
Sandberg, J.V., see Aarnio	219 (1984) 173
Sandberg, V.D., see Sandoval	216 (1983) 171
Sandberg, V.D., see Bolton	217 (1983) 173
Sandell, A., see Lindgren	214 (1983) 175
Sandell, A., see Lindgren	219 (1984) 149
Sandels, E.G., see Eaton	214 (1983) 151
Sanders, G.H., see Sandoval	216 (1983) 171
Sanders, J.B., see Roosendaal	218 (1983) 673
Sanderson, N.E., R.A. Cunningham, J.N. Mo, R. Chapman and J.L. Durell, On-line optimisation of the resolution of a magnetic spectrometer ( <i>Letter to the Editor</i> )	219 (1984) 250
Sandoval, J.P., L. Bayliss, T. Gordon, G. Hart, C.M. Hoffman, G.E. Hogan, V.D. Sandberg, G.H. Sanders and S.L. Wilson, Alternatives to coaxial cable for delaying analog and digital signals in a particle physics experiment	216 (1983) 171
Sanjeeviah, H., P. Venkataramaiah, K. Gopala, K.S. Gundu Rao and L. Paramesh, Background gamma radiation in the energy region below 3 MeV at Mysore	216 (1983) 231
Sanna, R., see O'Brien	214 (1983) 547
Sannes, F., see Andrews	211 (1983) 47
Sanni, A.O., J.R. Joyce and E.A. Schweikert, Radioactive implant induced X-ray emission: Part II	216 (1983) 497
Sannino, M., see Benso	217 (1983) 194
Santiard, J.C., see Mangeot	216 (1983) 79
Santiard, J.C., see Breskin	217 (1983) 131
Santiard, J.C., see Adams	217 (1983) 237
Santry, D.C., see Lone	214 (1983) 333
Sanzone, M., see Capitani	216 (1983) 307
Saremi, M., see Bentley	218 (1983) 555
Sarholt-Kristensen, L., see Johansen	218 (1983) 737
Saris, F.W., see Wang	211 (1983) 193
Sarkadi, L., see Mukoyama	211 (1983) 525
Sarkadi, L., L-shell Coulomb ionization	214 (1983) 43
Sarkar, M., Self-absorption effect for low energy X-rays ( <i>Letter to the Editor</i> )	214 (1983) 557
Sasaki, H., see Kumada	211 (1983) 283
Sasao, N., see Tanimori	216 (1983) 57
Sasao, N., see Adams	217 (1983) 237
Sato, F., see Hayashide	216 (1983) 127
Sato, S., see Fujii	215 (1983) 357
Sato, T., see Sugiyama	215 (1983) 17
Sauli, F., see Mangeot	216 (1983) 79
Sauli, F., see Adams	217 (1983) 237
Saulys, A.C., see Eiseman	217 (1983) 140
Saunders, P.A. and J.F. Ziegler, Interactive computer analysis of nuclear backscattering spectra	218 (1983) 67
Sawaki, A., see Orito	216 (1983) 439
Sawicka, B.D., see Sawicki	215 (1983) 567
Sawicki, J.A., T. Tyliczczak, J. Stanek, B.D. Sawicka and J. Kowalski, Conversion electron Mössbauer spectroscopy of $^{197}\text{Au}$ ( <i>Letter to the Editor</i> )	215 (1983) 567
Sawicki, J.A., see Kowalski	216 (1983) 299
Sawicki, J.A. and T. Tyliczczak, Resonant emission of secondary electrons associated with recoilless nuclear absorption of gamma rays in solids	216 (1983) 501
Saxon, D.H., see Hart	220 (1984) 309
Sayer, R.O., see Jones	220 (1984) 1
Scaramelli, A., see Albanese	212 (1983) 111
Schaad, T., see Blocker	216 (1983) 71
Schader, J., see Frischkorn	214 (1983) 123
Schäferlingová, W., see Franc	211 (1983) 159
Schall, G., see Böttcher	219 (1984) 369

- Schandera, Ch., Ch. Lauterbach and J. De Boer, Test and performance of position sensitive parallel plate avalanche detectors in heavy-ion kinematic coincidence measurements . . . . . 217 (1983) 128
- Scheerer, H.J., see Chalupka . . . . . 217 (1983) 113
- Scheidker, E., see Becker . . . . . 220 (1984) 338
- Schemmerling, K., J. Ahlert, M. Schumacher and F. Smend, Simple routing interface connecting four 12-bit analog-to-digital converters to a 16k CAMAC memory module . . . . . 216 (1983) 165
- Schempp, A., see Klein . . . . . 220 (1984) 200
- Scheuring, H., see Böttcher . . . . . 219 (1984) 369
- Schiavon, P., see Azaiez . . . . . 211 (1983) 335
- Schieber, M., Introduction to Fifth International Workshop on Mercuric Iodide Nuclear Radiation Detectors . . 213 (1983) 1
- Schieber, M., see Nissenbaum . . . . . 213 (1983) 27
- Schieber, M., see Levi . . . . . 213 (1983) 31
- Schieber, M., see Levi . . . . . 213 (1983) 35
- Schilling, E., see Meyer . . . . . 215 (1983) 65
- Schirm, N., see Langkau . . . . . 216 (1983) 19
- Schlagböhmer, A., see Albanese . . . . . 212 (1983) 111
- Schlosser, P., B. Kromer and W. Roether, Electronics for low-level counting using a microcomputer . . . . . 216 (1983) 155
- Schlotzhauer, G., see Gärtner . . . . . 216 (1983) 275
- Schmelzbach, P.A., see Grüebler . . . . . 212 (1983) 1
- Schmidt, B., see Von Borany . . . . . 212 (1983) 489
- Schmidt, W., see Nölscher . . . . . 218 (1983) 116
- Schmidt, W., see Saemann-Ischenko . . . . . 218 (1983) 757
- Schmidt-Parzefall, W., see Danilov . . . . . 217 (1983) 153
- Schmitt, H., see McMurray . . . . . 219 (1984) 29
- Schmitz, N., see Albanese . . . . . 212 (1983) 111
- Schmor, P.W., see Clegg . . . . . 212 (1983) 5
- Schneegans, M., see Albanese . . . . . 212 (1983) 111
- Schneider, F., see Jonker . . . . . 215 (1983) 361
- Schneider, P.J., W. Eckstein and H. Verbeek, Ion desorption spectrometry: a new method of surface investigation . . . . . 218 (1983) 713
- Schneider, W.F.W., see Geissel . . . . . 215 (1983) 329
- Schneiderreit, U., see Böttcher . . . . . 219 (1984) 369
- Schnepple, W.F., see Merz . . . . . 213 (1983) 51
- Schnepple, W.F., see Milstein . . . . . 213 (1983) 65
- Schnepple, W.F., see Ortale . . . . . 213 (1983) 95
- Schnepple, W.F., see Iwanczyk . . . . . 213 (1983) 123
- Schnepple, W.F., see Becchetti . . . . . 213 (1983) 127
- Schönauer, L., see Chalupka . . . . . 217 (1983) 113
- Schönbacher, H., see Grüb . . . . . 214 (1983) 469
- Schopper, H., Elementary particle physics – where is it going? . . . . . 219 (1984) 54
- Schouten, T., see De Marzo . . . . . 217 (1983) 405
- Schouten, Th., see Fent . . . . . 211 (1983) 315
- Schrijver, C.J., see Den Boggende . . . . . 220 (1984) 561
- Schroyen, D., see Wu . . . . . 218 (1983) 652
- Schult, O.W.B., see Martin . . . . . 214 (1983) 281
- Schultz, J.A., see Rabalais . . . . . 218 (1983) 719
- Schultze, K., see Albanese . . . . . 212 (1983) 111
- Schumacher, M., see Schemmerling . . . . . 216 (1983) 165
- Schütt, J., see Jonker . . . . . 215 (1983) 361
- Schütze, W., see Rohwer . . . . . 211 (1983) 543
- Schwartz, G., see Perez-Mendez . . . . . 217 (1983) 89
- Schweikert, E.A., see Sanni . . . . . 216 (1983) 497
- Schwentner, N., see Bahrdt . . . . . 216 (1983) 237
- Schwitters, R.F., see Blocker . . . . . 216 (1983) 71
- Scobel, W., see Langkau . . . . . 216 (1983) 19
- Scory, M., see Albanese . . . . . 212 (1983) 111
- Scott, D.M. and B.M. Paine, Accelerator energy calibration using nonresonant nuclear reactions . . . . . 218 (1983) 154
- Scrimaglio, R., see Capitani . . . . . 216 (1983) 307
- Seaborg, G.T., see Groening . . . . . 214 (1983) 317
- Sealock, R.M., A.P. Mazzolini and G.J.F. Legge, The use of He microbeams for light element X-ray analysis of biological tissue . . . . . 218 (1983) 217



Sears, V.F., Optimum sample thickness for total cross section measurements ( <i>Letter to the Editor</i> ) . . . . .	213 (1983) 561
Seebrunner, H.J., see Belau . . . . .	214 (1983) 253
Seebrunner, H.J., see Belau . . . . .	217 (1983) 224
Seiden, A., see Breakstone . . . . .	211 (1983) 73
Seidman, A., see Borgeaud . . . . .	211 (1983) 363
Seiler, P., see Becker . . . . .	220 (1984) 338
Seiler, P.G., see Becker . . . . .	214 (1983) 525
Seki, A., see Iida . . . . .	212 (1983) 413
Sekimura, M., see Naruse . . . . .	215 (1983) 213
Sekulin, R.L., see Bjelkhagen . . . . .	220 (1984) 300
Selen, M.A. and J.R. MacDonald, A Rutherford backscattering study of diffusion in polymers . . . . .	218 (1983) 451
Sellschop, J.P.F., C.C.P. Madiba, H.J. Annegarn and A.H. Andeweg, Positron analysis as a quantitative technique in ion beam analysis . . . . .	218 (1983) 23
Sellschop, J.P.F., see Annegarn . . . . .	218 (1983) 33
Sellschop, J.P.F., see Madiba . . . . .	218 (1983) 409
Sellschop, J.P.F., see Derry . . . . .	218 (1983) 559
Sellschop, J.P.F., J.F. Prins, U. Von Wimmersperg, M. Tredoux and M. Rebak, Ion beam analysis of powdered samples . . . . .	218 (1983) 593
Selove, W., see Kononenko . . . . .	214 (1983) 237
Selvaggi, G., see De Palma . . . . .	216 (1983) 393
Selvaggi, G., see De Palma . . . . .	217 (1983) 135
Selvaggi, G., see De Marzo . . . . .	217 (1983) 405
Semrad, D., see Aumayr . . . . .	212 (1983) 529
Semrad, D., M. Geretschlager and A. Rabler, Energy calibration at several hundred keV by time-of-flight and by comparing protons with $H_2^+$ ions . . . . .	215 (1983) 549
Semrad, D., P. Bauer, F. Aumayr, P. Huber and W. Obermann, Search for an influence of the measuring method on stopping cross section data near the maximum . . . . .	218 (1983) 811
Senftle, F.E., see Mikesell . . . . .	215 (1983) 561
Senftle, F.E., see Evans . . . . .	219 (1984) 233
Sengupta, S.K., see Bose . . . . .	212 (1983) 539
Sengupta, S., see Mehta . . . . .	213 (1983) 393
Senner, A.E., see Filatova . . . . .	211 (1983) 353
Sennhauser, U., see Bolton . . . . .	217 (1983) 173
Sens, J.C., see Van Driel . . . . .	215 (1983) 113
Sensintaffar, E., see Kahn . . . . .	219 (1984) 419
Septon, J.P., M.J.L. Turner and J.W. Leake, Avalanche fluctuations in a uniform field proportional counter filled with the Penning mixture neon–argon . . . . .	219 (1984) 534
Serbo, V.G., see Ginzburg . . . . .	219 (1984) 5
Serci, S., see Bressani . . . . .	211 (1983) 231
Serci, S., see Delunas . . . . .	213 (1983) 563
Sergiampietri, F., see Cerri . . . . .	214 (1983) 217
Sernicki, J., A versatile large area parallel plate avalanche counter (PPAC) for broad-range magnetic spectrographs . . . . .	212 (1983) 195
Seshakumari, Ch., see Yadagiri Reddy . . . . .	213 (1983) 381
Severi, M., see Petrillo . . . . .	219 (1984) 176
Seyboth, J., see De Palma . . . . .	216 (1983) 393
Seyboth, J., see De Palma . . . . .	217 (1983) 135
Seyboth, P., see Fent . . . . .	211 (1983) 315
Seyboth, P., see De Marzo . . . . .	217 (1983) 405
Seyerlein, J., see Fent . . . . .	211 (1983) 315
Seyerlein, J., see De Palma . . . . .	216 (1983) 393
Seyerlein, J., see De Palma . . . . .	217 (1983) 135
Seyerlein, J., see De Marzo . . . . .	217 (1983) 405
Sgarbi, C., see Baroni . . . . .	214 (1983) 381
Shachar, Y., see Hollos . . . . .	220 (1984) 140
Shafranov, M.D., see Filatova . . . . .	211 (1983) 353
Shafranov, M.S., see Filatova . . . . .	215 (1983) 135
Shahbazian, K.K., see Hartner . . . . .	216 (1983) 113
Shamai, Y., see Eisen . . . . .	211 (1983) 171
Shapiro, G., see Aihara . . . . .	217 (1983) 259
Shapiro, M.D., see Aihara . . . . .	217 (1983) 259

Sharma, A.P., see Farid	213 (1983) 513
Sharma, A.P., see Kumar	215 (1983) 535
Shcherbakov, Yu.A., see Exnerova	217 (1983) 425
Sheline, R.K., see Becker	211 (1983) 379
Shen, B.C., see Aihara	217 (1983) 259
Sheperd, R.A., see Hartner	216 (1983) 113
Sheppard, D.M., see Khaliquzzaman	216 (1983) 481
Shera, E.B., see Reuter	220 (1984) 288
Sherman, N.K., see Lambert	214 (1983) 349
Shestermanov, K.E., see Vovenko	212 (1983) 155
Shibata, M., see Hayashide	216 (1983) 135
Shields, T.H., see Levi-Setti	218 (1983) 368
Shiers, J., see Albanese	212 (1983) 111
Shikazono, N., see Sugiyama	215 (1983) 17
Shilo, I., see Nissenbaum	213 (1983) 27
Shima, K., S. Nagai, T. Mikumo and S. Yasumi, Measurement of the low energy tail spectra adjacent to the X-ray photopeak in Si(Li) X-ray detectoors	217 (1983) 515
Shimizu, T., see Kamon	213 (1983) 261
Shimizu, H., see Hatanaka	217 (1983) 397
Shimura, M., see Hayashide	216 (1983) 135
Shinsky, K.A., see Andrews	211 (1983) 47
Shmeleva, A., see Fabjan	216 (1983) 105
Shmid, M., R.L. Gill and C. Chung, Comparison between solid graphite and graphite cloth as a target backing material for an ISOL system	211 (1983) 287
Shoji, F., see Oura	218 (1983) 253
Shpak, E.V., Charged particle beam envelopes	213 (1983) 171
Shramenko, B.I., see Filatova	211 (1983) 353
Shul'pina, I.L., see Kozhukh	213 (1983) 483
Shunk, E.R., see Moss	219 (1984) 558
Shurygin, V.A., see Gott	214 (1983) 463
Shuvalov, R.S., see Cerri	214 (1983) 217
Siddiqui, S.A., see Ahsan	212 (1983) 333
Sieger, G., see Lefevre	218 (1983) 39
Sieger, G.E., see Overley	218 (1983) 43
Siemann, R.H., see Andrews	211 (1983) 47
Siemann, R.H., see Aharonian	212 (1983) 23
Siffert, P., see Tadjine	213 (1983) 77
Signorini, C., G. Bezzon, F. Cervellera, P. Spolaore and R.A. Ricci, Acceptance tests of the Legnaro XTU tandem	220 (1984) 30
Sikanen, P., see Puumalainen	212 (1983) 463
Sikanen, P. and P. Puumalainen, Polarisation properties of bremsstrahlung produced by electron opaque targets of low-Z-elements with application to X-ray fluorescence analysis	212 (1983) 469
Silaev, A.N., see Gott	214 (1983) 463
Sillou, D., see Ditta	220 (1984) 343
Silverman, A., see Andrews	211 (1983) 47
Silverman, P.J., see MacDonald	218 (1983) 765
Silversides, W., see Beech	220 (1984) 170
Simonini, R., see Coceva	211 (1983) 459
Simons, D.G., see Land	214 (1983) 35
Simons, D.G., M.D. Brown, J. Fine, T.D. Andeadis and B. Navinšek, Rutherford backscattering analysis of multilayered Cr-Ni structures to be used for sputtering standards	218 (1983) 585
Simpson, J., see James	212 (1983) 545
Simpson, J.W., see O'Neill	216 (1983) 361
Sims, M.R., G. Manzo, A. Peacock and B.G. Taylor, Performance characteristics of a fluorescent gated gas scintillation proportional counter	211 (1983) 499
Singer, G., see Albanese	212 (1983) 111
Singovsky, A.V., see Binon	214 (1983) 269
Singovsky, A.V., see Inyakin	215 (1983) 103
Sinha, B.K., see Bose	217 (1983) 521
Sinha, B.K. and R. Bhattacharyya, Hryniewicz's third relation and its application in the measurements of magnetic moments ( <i>Letter to the Editor</i> )	219 (1984) 443

- Sipilä, H. and M.-L. Järvinen, Extended lifetime of a wire chamber . . . . . 217 (1983) 298
- Sipilä, H., see Järvinen . . . . . 217 (1983) 282
- Skarpaas, K., see Toki . . . . . 219 (1984) 479
- Skorka, S.J., see Rohrer . . . . . 220 (1984) 161
- Skubic, P., see Andrews . . . . . 211 (1983) 47
- Slater, W.E., see Aihara . . . . . 217 (1983) 259
- Slattery, P., see Chandlee . . . . . 215 (1983) 369
- Slattery, P., see Nelson . . . . . 216 (1983) 381
- Slaughter, D.R., H.S. Spracklen and R. Delvasto, Time and space resolved neutron diagnostic systems for magnetically confined plasmas . . . . . 215 (1983) 443
- Sloan, T., see Albanese . . . . . 212 (1983) 111
- Slobodrian, R.J., Proposed new method, simple and durable, for the production of highly polarized electrons (*Letter to the Editor*) . . . . . 220 (1984) 582
- Smeenk, R.G., see Notermans . . . . . 215 (1983) 555
- Smend, F., see Schemmerling . . . . . 216 (1983) 165
- Smirnov, G.V., see Chumakov . . . . . 216 (1983) 505
- Smirnov, V.I., see Sokol . . . . . 219 (1984) 336
- Smith, A.M., see Dalglish . . . . . 215 (1983) 9
- Smith, A.M., see Dalglish . . . . . 218 (1983) 7
- Smith, D., see Christmas . . . . . 215 (1983) 397
- Smith, D.B., see Palladino . . . . . 212 (1983) 163
- Smith, G.B., see Bird . . . . . 218 (1983) 53
- Smith, H., see Areti . . . . . 212 (1983) 135
- Smith, J.M., see Williams . . . . . 220 (1984) 585
- Smith, K.M., see Raine . . . . . 217 (1983) 305
- Smith, N.V., see Johnson . . . . . 214 (1983) 505
- Smith, P., A laser system for monitoring photomultiplier tubes in counter arrays . . . . . 214 (1983) 385
- Smith, R., see Albanese . . . . . 212 (1983) 111
- Smith, S., see Adams . . . . . 217 (1983) 237
- Smither, R.K., see Kutschera . . . . . 220 (1984) 118
- Snyder, A., see Andrews . . . . . 211 (1983) 47
- Sobie, R.J., T.E. Drake, B.M. Barnett, K.L. Erdman, W. Gyles, R.R. Johnson, H.W. Roser, R. Tacik, E.W. Blackmore, D.R. Gill, S. Martin, C.A. Wiedner and T. Masterson, The TRIUMF low energy pion spectrometer and channel . . . . . 219 (1984) 501
- Sobotka, L.G., see McDonald . . . . . 219 (1984) 508
- Sobotka, S.E., G.G. Cornick, R.H. Kretsinger, R.G. Rains, W.A. Stephens and L.J. Weissman, A MWPC X-ray diffractometer facility for protein crystallography . . . . . 220 (1984) 575
- Sochacka, R., see Głowacka . . . . . 216 (1983) 303
- Sofield, C.J., see Cowern . . . . . 216 (1983) 287
- Sohet, L., see Anders . . . . . 219 (1984) 66
- Sokol, E.A., P.N. Chuong, V.I. Smirnov, M.P. Ivanov, G.M. Ter-Akopian and L.P. Chelnokov, Study of methods for reducing the intrinsic background of a neutron detector for rare spontaneous fission events . . . . . 219 (1984) 336
- Solar, A., see Flores . . . . . 212 (1983) 375
- Solovianov, V.L., see Frolov . . . . . 216 (1983) 93
- Soman, S.D., see Mehta . . . . . 213 (1983) 393
- Someya, H., see Kumada . . . . . 211 (1983) 283
- Sondheim, W.E., R.M. Devries, M.R. Clover, N.J. Digiacomo, J.S. Kapustinsky and J.W. Sunier, A large angular acceptance plastic Cherenkov detector for intermediate energy physics . . . . . 219 (1984) 97
- Soper, A.K., Multiple scattering from an infinite plane slab . . . . . 212 (1983) 337
- Sørensen, A.H. and E. Bonderup, Electron cooling . . . . . 215 (1983) 27
- Sørensen, G., see Eskildsen . . . . . 218 (1983) 485
- Sørensen, H., see Børgesen . . . . . 212 (1983) 517
- Soria, D., see Adam . . . . . 217 (1983) 291
- Soszka, M. and W. Soszka, Ion–electron emission from magnetostrictive alloy . . . . . 218 (1983) 782
- Soszka, W., see Soszka, M. . . . . 218 (1983) 782
- Soszynski, T., see Areti . . . . . 212 (1983) 135
- Souda, R., see Aono . . . . . 218 (1983) 241
- Soussaline, F., see Mine . . . . . 211 (1983) 561
- Southon, J.R., J.S. Vogel, G. Richards and D.E. Nelson, The measurement of  $^{10}\text{Be}$  with an accelerator at 3 MV (*Letter to the Editor*) . . . . . 219 (1984) 435
- Spada, G., see Ubertaini . . . . . 217 (1982) 97



Spadafora, A., see Toki	219 (1984) 479
Spalding, W.J., see Hartner	216 (1983) 113
Spandre, G., see Perez-Mendez	217 (1983) 89
Spandre, G., see Bellazzini	217 (1983) 93
Spellmeyer, B., see Busse	220 (1984) 26
Spencer, R.R., see Peelle	211 (1983) 167
Spengler, J., see Drescher	216 (1983) 35
Speziali, V., see Manfredi	211 (1983) 83
Spinelli, P., see De Palma	216 (1983) 393
Spinelli, P., see De Palma	217 (1983) 135
Spinelli, P., see De Marzo	217 (1983) 405
Spinelli, P., see De Palma	219 (1984) 87
Spinka, H., E. Colton, W.R. Ditzler, H. Halpern, K. Imai, R. Stanek, N. Tamura, G. Theodosiou, K. Toshioka, D. Underwood, R. Wagner, Y. Watanabe, A. Yokosawa, G.R. Burleson, W.B. Cottingham, S.J. Greene, S. Stuart and J.J. Jarmer, Beam polarization at the ZGS	211 (1983) 239
Spiridonov, A.A., see Vovenko	212 (1983) 155
Spolaore, P., see Signorini	220 (1984) 30
Spracklen, H.S., see Slaughter	215 (1983) 443
Sproston, M., see Albanese	212 (1983) 111
Spuller, J., see Hargrove	219 (1984) 461
Spurling, K., see Beech	220 (1984) 170
Spyrou, N.M., see Foster	212 (1983) 301
Šroubek, Z., Ionization of atoms sputtered from $A^{III}V^V$ compounds	218 (1983) 336
Stacey, A.J., see Hartner	216 (1983) 113
Städele, M., see Fink	218 (1983) 171
Städele, M., see Fink	218 (1983) 817
Stähelin, P., see Büngener	217 (1983) 254
Stähelin, P., see Abt	217 (1983) 377
Stähelin, P., see Büngener	214 (1983) 261
Stanek, J., see Sawicki	215 (1983) 567
Stanek, J., see Kowalski	216 (1983) 299
Stanek, R., see Spinka	211 (1983) 239
Staniforth, J.A., Voltage calculations for a single-ended Van de Graaff machine with secondary breakdowns	216 (1983) 1
Staniforth, J.A., Breakdown calculations following spark breakdown in a tandem machine	220 (1984) 93
Stanovnik, A., see Kernel	214 (1983) 273
Starič, M., D. Zavrtanik and G. Kernel, Some simple approaches used in the construction of multiwire proportional chambers	216 (1983) 67
Staubert, K., see Böttcher	219 (1984) 369
Steele, B.C.H., see Tannhauser	218 (1983) 504
Steffen, P., see Dietrich	217 (1983) 160
Steffens, E., see Krämer	220 (1984) 123
Stein, P.C., see Andrews	211 (1983) 47
Steiner, D., see Antille	217 (1983) 327
Steinert, L., see Matthes	220 (1984) 112
Stepantsov, S.V., see Chepigin	220 (1984) 419
Stephan, C., see Louvel	211 (1983) 535
Stephan, K.H. and M. Henne, A proportional counter with one dimensional position sensitivity for image scanning in the soft X-ray region	213 (1983) 411
Stephen, J.B., see Ubertaini	217 (1983) 97
Stephens, K.G., see Hemment	218 (1983) 103
Stephens, K.G., see Kilner	218 (1983) 573
Stephens, W.A., see Sobottka	220 (1984) 575
Stephens-Newsham, L.G., see Khaliqzaman	216 (1983) 481
Stephenson, R., see Bateman	217 (1983) 77
Stephenson, W.A., see Evans	219 (1984) 233
Stern, E.A., see Lu	212 (1983) 475
Sternal, G., see Meyer	215 (1983) 65
Sterenburg, W., see Devito	215 (1983) 423
Stetz, A.W., see Bracco	219 (1984) 329
Stevenson, G.R., see Nelson	215 (1983) 385

- Stevenson, G.R., A Fassò, M. Hoefert, M.C. Nielsen and R.C. Raffnsøe, The yield of resonance neutrons from a thick copper target bombarded by electrons with energies up to 100 GeV . . . . . 216 (1983) 99
- Stevenson, J.D. and J.A. Musser, A threshold Cherenkov counter for isotopic identification high-energy heavy ions . . . . . 213 (1983) 285
- Stevenson, M.L., see Aihara . . . . . 217 (1983) 259
- Stier, H.E., see Albanese . . . . . 212 (1983) 111
- Stika, K.M., see Williams . . . . . 218 (1983) 299
- Stockhausen, W., see Albanese . . . . . 212 (1983) 111
- Stoffel, J., see Areti . . . . . 212 (1983) 135
- Stöffl, W., see Becker . . . . . 211 (1983) 379
- Stöffl, W., see Decman . . . . . 219 (1984) 523
- Stoica, A.D. and A. Jipa, On ultracold neutron generation in material bottles (*Letter to the Editor*) . . . . . 219 (1984) 447
- Stone, R., see Andrews . . . . . 211 (1983) 47
- Stone, S., see Ehrlich . . . . . 211 (1983) 17
- Stone, S., see Andrews . . . . . 211 (1983) 47
- Stone, S., see Kubota . . . . . 217 (1983) 249
- Stork, D.H., see Aihara . . . . . 217 (1983) 259
- Storm, D.W., see Cramer . . . . . 220 (1984) 204
- Stoyanova, D.A., see Cerri . . . . . 214 (1983) 217
- Strachan, J.D. and G. Zankl, A note on the interpretation of activation measurements on the Princeton Large Torus (*Letter to the Editor*) . . . . . 214 (1983) 551
- Strasters, B.A., A. Vermeer and N.A. van Zwol, Improvements in ANIS and inverted sputter sources . . . . . 220 (1984) 109
- Strasters, B.A., see Van der Borg . . . . . 220 (1984) 115
- Strathman, M.D., see Norbeck . . . . . 215 (1983) 7
- Streubel, G., see Dörschel . . . . . 216 (1983) 227
- Ströher, H., see Drexler . . . . . 220 (1984) 409
- Stroot, J.P., see Binon . . . . . 214 (1983) 269
- Struble, G.L., see Becker . . . . . 211 (1983) 379
- Stuart, S., see Spinka . . . . . 211 (1983) 239
- Stuchbery, A.E., Electrodeposition of Pt and Os targets for nuclear reaction experiments . . . . . 211 (1983) 293
- Studt, M., see Albanese . . . . . 212 (1983) 111
- Sturland, I.M., see Earwaker . . . . . 218 (1983) 481
- Stwertka, P.M., see Cormier . . . . . 212 (1983) 185
- Su Ching-Shen, A new time-of-flight mass spectrometer . . . . . 220 (1984) 431
- Sudol, J., see Berliner . . . . . 213 (1983) 333
- Suekane, F., see Arai . . . . . 217 (1983) 181
- Suffert, M., see Blüm . . . . . 213 (1983) 251
- Suffert, M., P. Pavlopoulos, K. Zioutas and A. Hegerath, The response of a 10" × 12" NaI(Tl) spectrometer to 130 MeV to 387 MeV  $\gamma$ -rays . . . . . 215 (1983) 107
- Sugano, K., see Adams . . . . . 217 (1983) 237
- Sugawara, F., see Suzuki . . . . . 211 (1983) 565
- Sugimoto, K., see Asahi . . . . . 220 (1984) 389
- Sugiyama, T., see Mori . . . . . 211 (1983) 407
- Sugiyama, Y., N. Shikazono, T. Sato and H. Ikegami, Magnetic field measurement of the JAERI heavy-ion spectrograph "ENMA" . . . . . 215 (1983) 17
- Sujkowski, Z., see Van Ruyven . . . . . 216 (1983) 141
- Sujkowski, Z., D. Chmielewska and M.N. Harakeh, Determination of the  $\alpha$ -induced K-shell ionization cross sections from the measured intensity ratios of K X-rays to  $(2^+ 0^+)$   $\gamma$ -rays in even deformed nuclei . . . . . 219 (1984) 111
- Sun, C.-R., see Filatova . . . . . 211 (1983) 353
- Sun, C.R., see Wang . . . . . 218 (1983) 669
- Sundqvist, B., Biomolecule mass spectrometry by fast heavy ion induced desorption . . . . . 218 (1983) 267
- Sunier, J.W., see Sondheim . . . . . 219 (1984) 97
- Survanshi, S.S., see Weathersby . . . . . 220 (1984) 571
- Sutulin, V.A., see Filatova . . . . . 211 (1983) 353
- Suzuki, I.H., F. Sugawara and K. Sakihara, Angular distributions of soft X-rays from the ETL-storage ring (*Letter to the Editor*) . . . . . 211 (1983) 565
- Suzuki, K., see Orito . . . . . 216 (1983) 439
- Suzuki, M., Recombination luminescence from ionization tracks produced by alpha particles in high pressure argon, krypton and xenon gases . . . . . 215 (1983) 345
- Suzuki, T., see Minemura . . . . . 219 (1984) 472
- Swann, P.R., see Lundquist . . . . . 218 (1983) 563

Swansen, J.E., see Krick	219 (1984) 384
Swanson, L.W., Liquid metal ion sources: mechanism and applications	218 (1983) 347
Swanson, M.L. and L.M. Howe, Ion beam analysis of defect trapping	218 (1983) 613
Swanson, M.L., L.M. Howe, A.F. Quenneville and J.A. Nilson, Interstitial trapping in Fe-implanted Al after excimer laser annealing	218 (1983) 643
Swanson, M.L., see Howe	218 (1983) 663
Swars, M., see Krolzig	219 (1984) 430
Swart, T., see McMurray	219 (1984) 29
Swinhoe, M.T., see Asher	213 (1983) 503
Sylin, G., see Bauwens	216 (1983) 349
Szabó, Gy., see Kiss	212 (1983) 81
Szabó, Gy., see Hunyadi	220 (1984) 154
Szecsí, L., see Bauer	214 (1983) 189
Szklarz, G., see Dudelzak	217 (1983) 208
Szymczyk, W.M., see Dabrowski	213 (1983) 89
Szymczyk, W.M., see Beyerle	213 (1983) 107
Szymczyk, W.M., see Iwanczyk	213 (1983) 123
Taccetti, N., see Bini	212 (1983) 235
Tacik, R., see Sobie	219 (1984) 501
Tadjine, A., D. Gosselin, J.M. Koebel and P. Siffert, Search for correlations between electrical characteristics and stoichiometry in mercuric iodide	213 (1983) 77
Tait, N.R.S., see Bailey	213 (1983) 517
Tait, N.R.S., A review of the commissioning and initial operation of the NSF tandem accelerator	220 (1984) 54
Tait, W.H., see Blunden	216 (1983) 191
Taiuti, M., M. Anghinolfi, P. Corvisiero, G. Ricco and A. Zucchiatti, Computed response functions of large NaI spectrometers at photon energies above 20 MeV	211 (1983) 135
Takada, J., see Jin	212 (1983) 259
Takagi, A., see Mori	220 (1984) 264
Takagi, S., S. Ohtani, K. Kadota and J. Fujita, Collision experiment on highly ionized ions using a vacuum spark source	213 (1983) 539
Takagi, S., T. Iwai, Y. Kaneko, M. Kimura, N. Kobayashi, A. Matsumoto, S. Ohtani, K. Okuno, H. Tawara and S. Tsurubuchi, Gain characteristics of a microchannel plate and a channel-electron multiplier for low energy multiply charged ions	215 (1983) 207
Takagui, E.M., see Koide	215 (1983) 61
Takahashi, N., see Asahi	220 (1984) 389
Takahashi, T., see Fujii	215 (1983) 357
Takai, H., see Koide	215 (1983) 177
Takano, M., see Kokame	213 (1983) 317
Takasaki, F., see Arai	214 (1983) 209
Takasaki, F., see Hayashide	216 (1983) 127
Takeda, H., see Orito	215 (1983) 93
Takeda, N., see Koori	220 (1984) 453
Takeuchi, S. and T. Nagai, Random pulser based on photon counting	215 (1983) 199
Takeuchi, S., see Yamashita	219 (1984) 353
Takikawa, K., see Abe	220 (1984) 293
Takiue, M., M. Hayashi, T. Natake and H. Ishikawa, Elimination of chemiluminescence in liquid scintillation measurement	219 (1984) 192
Talaga, R.L., see Bowman	216 (1983) 399
Talman, R., see Ehrlich	211 (1983) 17
Talman, R., see Andrews	211 (1983) 47
Tamminga, Y., M.F.C. Willemsen and R. Van Silfhout, Optimization and application of glancing angle Rutherford backscattering spectrometry	218 (1983) 107
Tamura, H., see Hatanaka	217 (1983) 397
Tamura, H., see Ishitani	218 (1983) 363
Tamura, N., see Spinka	211 (1983) 239
Tanaka, M., see Krämer	220 (1984) 123
Tanaka, R., see Abe	220 (1984) 293
Tanenbaum, W., see Andrews	211 (1983) 47
Tanguy, P., see Jiang Bin-Yao	213 (1983) 179
Tanimori, T., see Fujii	215 (1983) 357



- Tanimori, T., T. Kageyama, K. Nakamura, M. Yoshioka, J. Haba, H. Kawai, M. Kobayashi, T.S. Nakamura and N. Sasao, A test of 150 cm  $\times$  20 cm wide time-of-flight scintillation counters . . . . . 216 (1983) 57
- Tanner, A.B., see Evans . . . . . 219 (1984) 233
- Tannhauser, D.S., J.A. Kilner and B.C.H. Steele, The determination of the oxygen self-diffusion and gas-solid exchange coefficients for stabilized zirconia by SIMS . . . . . 218 (1983) 504
- Tappern, G.J.R., see Bateman . . . . . 217 (1983) 77
- Tassan-Got, L., see Louvel . . . . . 211 (1983) 535
- Tau, S., see Perez Ferreira . . . . . 220 (1984) 37
- Tauscher, L., see Blüm . . . . . 213 (1983) 251
- Tavares, O.A.P., see Knöfel . . . . . 212 (1983) 387
- Tavernier, S.P.K., see Benichou . . . . . 214 (1983) 245
- Tawara, H., see Takagi . . . . . 215 (1983) 207
- Taylor, A.D., see Golub . . . . . 212 (1983) 349
- Taylor, B.G., see Sims . . . . . 211 (1983) 499
- Taylor, T.N., see Thompson . . . . . 218 (1983) 475
- Tedeschi, R., P. Podini, R. De Renzi, A.P. Jeavons, R. Magnanini and L.O. Norlin, A wire-chamber spectrometer for muon spin rotation . . . . . 214 (1983) 509
- Teegarden, B., see Paciesas . . . . . 215 (1983) 261
- Telnov, V.I., see Ginzburg . . . . . 219 (1984) 5
- Tenney, F.H., Idealized pulse pileup effects on energy spectra . . . . . 219 (1984) 165
- Ter-Akopian, G.M., see Sokol . . . . . 219 (1984) 336
- Ter-Akopian, G.M., See Chepigin . . . . . 220 (1984) 419
- Teramoto, Y., see Eiseman . . . . . 217 (1983) 140
- Tersigni, A., see Perez Ferreira . . . . . 220 (1984) 37
- Tervo, R.J., see Burgess . . . . . 214 (1983) 431
- Tervo, R.J., see Kennett . . . . . 215 (1983) 159
- Tervo, R.J., T.J. Kennett and W.V. Prestwich, An automated background estimation procedure for gamma ray spectra . . . . . 216 (1983) 205
- Testoni, J., see Perez Ferreira . . . . . 220 (1984) 37
- Thacher, P.D., see Jacobs . . . . . 213 (1983) 387
- The, H.L., W. Michaelis and H.-U. Fanger, Particle-size effects in non-destructive material assay by gamma-ray absorptiometry, I. Theoretical model . . . . . 212 (1983) 445
- Thénard, J.M., see Albanese . . . . . 212 (1983) 111
- Theodosiou, G., see Spinka . . . . . 211 (1983) 239
- Theodosiou, G.E., see Kononenko . . . . . 214 (1983) 237
- Thieberger, P., The Brookhaven double MP facility: recent developments and plans for the future . . . . . 220 (1984) 45
- Thieberger, P., Possible use of synchrotrons as post-acceleration boosters for tandems . . . . . 220 (1984) 209
- Thiele, K., see Albanese . . . . . 212 (1983) 111
- Thies, H.H., see Ahsan . . . . . 212 (1983) 333
- Thomas, J., P. Parker, G. Herzog and D. Pal, Tandem accelerator mass spectrometry of  $^{26}\text{Al}$  from an iron meteorite . . . . . 211 (1983) 511
- Thomas, J., see Anthony . . . . . 218 (1983) 463
- Thomas, J.P., M. Fallavier, D. Ramdane, N. Chevarier and A. Chevarier, High resolution depth profiling of light elements in high atomic mass materials . . . . . 218 (1983) 125
- Thomas, J.P., M. Fallavier, H. Carchano and L. Alimoussa, Ion beam analysis techniques and characterization of amorphous hydrogenated GaAs . . . . . 218 (1983) 579
- Thompson, J.A., see Cleland . . . . . 216 (1983) 405
- Thompson, J.C., see Albanese . . . . . 212 (1983) 111
- Thompson, J.R., see Van Driel . . . . . 215 (1983) 113
- Thompson, K.A., W.P. Ellis, T.N. Taylor, S.M. Valone and C.J. Maggiore, Surface structural determination of  $\text{UO}_2(111)$  using MeV ions . . . . . 218 (1983) 475
- Thompson, M.G., see Ayre . . . . . 220 (1984) 549
- Thompson, P., see Chandlee . . . . . 215 (1983) 369
- Thompson, P., see Nelson . . . . . 216 (1983) 381
- Thorn, R., see Eastham . . . . . 220 (1984) 90
- Thorndike, E.H., see Andrews . . . . . 211 (1983) 47
- Thorson, W.R., Treatment of long-range couplings in collisional charge transfer from  $\text{H}(1s)$  to fully-stripped ions . . . . . 214 (1983) 97
- Thouroude, D. et A. Durand, Sur une méthode d'étude de la dynamique des particules traversant l'espace accélérateur d'un cyclotron . . . . . 212 (1983) 53
- Tichit, J., see Mangeot . . . . . 216 (1983) 79

- Tichit, J., see Adams . . . . . 217 (1983) 237
- Ticho, H.K., see Aihara . . . . . 217 (1983) 259
- Tiecke, H., see Daum . . . . . 217 (1983) 361
- Timsit, R.S., see Moreau . . . . . 218 (1983) 111
- Tippens, W.B., see Hollas . . . . . 219 (1984) 275
- Titkov, A.N., see Kozhukh . . . . . 213 (1983) 483
- Tjan, K., see Fink . . . . . 218 (1983) 171
- Tjan, K., see Fink . . . . . 218 (1983) 817
- Todd, J.H., L.W. Weston and G.J. Dixon, A parallel plate  $^{10}\text{B}$  neutron detector . . . . . 219 (1984) 575
- Todorović, Ž. and R. Antanasijević, A new method for identification of low energy fragments with  $8 < Z \leq 18$  in plastic track detector Makrofol . . . . . 212 (1983) 217
- Toge, N., see Némethy . . . . . 212 (1983) 273
- Toge, N., see Aihara . . . . . 217 (1983) 259
- Toki, W., K. Bunnell, R. Cassell, K. Skarpaas, J. Becker, J. Brown, K. Einsweiler, J. Russell, A. Spadafora, H.-J. Willutzki and W. Wisniewski, The barrel shower counter for the Mark III detector at SPEAR . . . . . 219 (1984) 479
- Tolfree, D.W.L., see Bailey . . . . . 213 (1983) 517
- Tolkiehn, G. and W. Petersen, A method for the quantitative determination of synchrotron radiation X-ray spectra for absolute XRF trace element detection . . . . . 215 (1983) 515
- Tombrello, T.A., Surface modification using MeV ion beams . . . . . 218 (1983) 679
- Tomek, S., see Krištiak . . . . . 211 (1983) 413
- Tominaga, S., Generation of precise scintillator response curves by an interpolation technique . . . . . 215 (1983) 231
- Tomita, M., N. Ikuchi, S. Miyagi and M. Sakisaka, A PIXE–RBS method for measuring partial sputtering yields of stainless steel . . . . . 213 (1983) 469
- Toohig, T.E., see Filatova . . . . . 211 (1983) 353
- Toshioka, K., see Spinka . . . . . 211 (1983) 239
- Toth, K.S., see Noma . . . . . 211 (1983) 391
- Townes, B.M., see Lone . . . . . 214 (1983) 333
- Tran, M.T., see Antille . . . . . 217 (1983) 327
- Trasatti, L., see Battistoni . . . . . 219 (1984) 300
- Traspedini, L., see Benso . . . . . 217 (1983) 194
- Trautmann, D., F. Rösel and G. Bauer, Accurate calculation of inner-shell ionization . . . . . 214 (1983) 21
- Trautman, V.Yu., see Kiselev . . . . . 220 (1984) 399
- Traxler, G., R. Fischer and H. Vonach, A multiwire proportional chamber for the measurement of differential ( $\eta$ , charged particle) cross-sections . . . . . 217 (1983) 121
- Tredoux, M., see Annegarn . . . . . 218 (1983) 33
- Tredoux, M., see Sellschop . . . . . 218 (1983) 593
- Treichel, M., R. Isenbügel and N. Marquardt, A differentially pumped supersonic jet gas target for low-energy nuclear reaction experiments . . . . . 212 (1983) 101
- Tremblay, D. and D. Roy, The truncated spherical mirror for energy analysis combined with direct measurement of angular distribution . . . . . 220 (1984) 270
- Treptow, K., see Areti . . . . . 212 (1983) 135
- Trifonov, A., see Exnerova . . . . . 217 (1983) 425
- Trinks, U., Superconducting cyclotrons as boosters for tandems . . . . . 220 (1984) 186
- Tröger, P., see Böttcher . . . . . 219 (1984) 369
- Trombka, J.I., see Evans . . . . . 219 (1984) 233
- Troshev, T., see Exnerova . . . . . 217 (1983) 425
- Trostell, B., see Ramström . . . . . 219 (1984) 438
- Tröster, D., see Blüm . . . . . 213 (1983) 251
- Trzaska, W., J. Äystö and J. Kantele, Semiconductor telescope spectrometer for beta-ray spectra . . . . . 212 (1983) 221
- Tsai, J.S., see Kennett . . . . . 215 (1983) 159
- Tsong, I.S.T., see Loxton . . . . . 218 (1983) 340
- Tsong, I.S.T., see King . . . . . 218 (1983) 687
- Tsong, I.S.T., see Ziv . . . . . 218 (1983) 742
- Tsong, T.T., Time-of-flight atom-probe field ion microscope analysis of thin films: surface segregation of alloys and early stages of silicide formation . . . . . 218 (1983) 383
- Tsubone, I., Y. Nakajima, Y. Furuta and Y. Kanda, Utilization of Fe-filtered neutron beam for total cross section measurements up to 1 MeV . . . . . 215 (1983) 171
- Tsuda, M. and T. Mori, The short-term fading of TLDs . . . . . 219 (1984) 588
- Tsurubuchi, S., see Takagi . . . . . 215 (1983) 207
- Tsyganov, E.N., see Filatova . . . . . 211 (1983) 353
- Tsyganov, E.N., see Filatova . . . . . 215 (1983) 135

- Tueller, J., see Paciesas . . . . . 215 (1983) 261  
 Tumanov, V.I., see Filatova . . . . . 211 (1983) 353  
 Tungate, G., see Krämer . . . . . 220 (1984) 123  
 Turcotte, J., see Roy . . . . . 215 (1983) 409  
 Turkiewicz, I.M., see Krämer . . . . . 220 (1984) 123  
 Turkot, F., see Areti . . . . . 212 (1983) 135  
 Turner, M.J.L., see Sephton . . . . . 219 (1984) 534  
 Tuyn, J., see De Felice . . . . . 212 (1983) 359  
 Tuzzolino, A.J., Pulse amplitude method for determining the pyroelectric coefficient of pyroelectric materials . . . . . 212 (1983) 505  
 Twomey, T., see Potts . . . . . 219 (1984) 601  
 Tyapkin, I.A., see Filatova . . . . . 211 (1983) 353  
 Tyapkin, I.A., see Filatova . . . . . 215 (1983) 135  
 Tyliszczak, T., see Sawicki . . . . . 215 (1983) 567  
 Tyliszczak, T., see Kowalski . . . . . 216 (1983) 299  
 Tyliszczak, T., see Sawicki . . . . . 216 (1983) 501  
  
 Ubertini, P., see Bazzano . . . . . 214 (1983) 481  
 Ubertini, P., A. Bazzano, L. Boccaccini, C. La Padula, M. Mastropietro, R. Patriarca, V.F. Polcaro, L. Barbareschi, F. Perotti, G. Villa, R.C. Butler, G. Di Cocco, G. Spada, P. Charalambous, A.J. Dean and J.B. Stephen, An imaging escape gated MWPC for hard X-ray astronomy . . . . . 217 (1983) 97  
 Udo, F., see Jonker . . . . . 215 (1983) 361  
 Ueno, K., see Adams . . . . . 217 (1983) 237  
 Ukai, K., see Kokame . . . . . 213 (1983) 317  
 Umeda, Y., see Fujii . . . . . 215 (1983) 357  
 Umemura, K., see Ishitani . . . . . 218 (1983) 363  
 Underwood, D., see Spinka . . . . . 211 (1983) 239  
 Unertl, W.N., see MacDonald . . . . . 218 (1983) 765  
 Unno, Y., see Arai . . . . . 214 (1983) 209  
 Uralsky, D.V., see Filatova . . . . . 211 (1983) 353  
 Uralsky, D.V., see Filatova . . . . . 215 (1983) 135  
 Urban, M., see Aihara . . . . . 217 (1983) 259  
 Ushio, S., see Inada . . . . . 218 (1983) 607  
 Ussery, L.E., see Becker . . . . . 211 (1983) 379  
 Ussery, L.E., see Decman . . . . . 219 (1984) 523  
 Utsuro, M., A fall-focussing gravity spectrometer for very slow neutrons (*Letter to the Editor*) . . . . . 213 (1983) 557  
 Uyttenhove, J. and C. Van den Bossche, A modulator power supply for electrochemical etching (*Letter to the Editor*) . . . . . 211 (1983) 219  
 Uzunian, A.V., see Maslov . . . . . 217 (1983) 419  
  
 Vacher, J., see Moszyński . . . . . 217 (1983) 453  
 Vahia, M.N., see Kukreja . . . . . 219 (1984) 196  
 Vakhrushev, S.B., see Kozhukh . . . . . 213 (1983) 483  
 Valente, V., see Jonker . . . . . 215 (1983) 361  
 Vallerga, J.V., see Ricker . . . . . 213 (1983) 133  
 Valone, S.M., see Thompson . . . . . 218 (1983) 475  
 Van Beek, G., see Benichou . . . . . 214 (1983) 245  
 Van Berg, R., see Kononenko . . . . . 214 (1983) 237  
 Van Daalen Wetters, R.F., see Aihara . . . . . 217 (1983) 259  
 Van Dalen, G.J., see Aihara . . . . . 217 (1983) 259  
 Van den Berg, L., see Levi . . . . . 213 (1983) 31  
 Van den Berg, L., see Merz . . . . . 213 (1983) 51  
 Van den Berg, L., see Milstein . . . . . 213 (1983) 65  
 Van den Bossche, C., see Uyttenhove . . . . . 211 (1983) 219  
 Van der Borg, K., A.P. de Haas, A.M. Hoogenboom, B.A. Strasters, A. Vermeer and N.A. van Zwol, The injector of the Utrecht EN tandem . . . . . 220 (1984) 115  
 Van der Graaf, H. and J.P. Wagenaar, A calculation in three dimensions of the induced charge on the electrodes of an MWPC . . . . . 217 (1983) 330  
 Van der Graaf, H. and J.P. Wagenaar, A novel, two dimensional, fast, low cost and accurate readout system for MWPCs . . . . . 217 (1983) 357  
 Van der Plicht, J. and A. Gavron, A two-dimensional position-sensitive MWPC for fission fragments . . . . . 211 (1983) 403  
 Van der Wiel, M.J., see Bruijn . . . . . 219 (1984) 603



- Van Doninck, W., see Brisson . . . . . 215 (1983) 79
- Van Driel, M., K.H. Kess, G.E. Masek, J.C. Sens, J.R. Thompson, J. Weber and J.T. White, The effect of heat on radiation damage in large NaI crystals . . . . . 215 (1983) 113
- Van Engelen, C.P.M., R.O. Blaauboer and R. Kamermans, A delay-line position readout for a heavy-ion proportional counter . . . . . 219 (1984) 529
- Van Hecke, H., see Andrews . . . . . 211 (1983) 47
- Van Hove, M.A., see Kuzminski . . . . . 217 (1983) 449
- Van Oers, W.T.H., see Bracco . . . . . 219 (1984) 329
- Van Oystaeyen, B. and G. Demortier, Matrix effects in PIXE evaluation of the major components in thick homogeneous samples . . . . . 215 (1983) 299
- Van Oystaeyen, B., see Deconninck . . . . . 218 (1983) 165
- Van Ruyven, J.J., Z. Sujkowski, W.H.A. Hesselink and H. Verheul, The response of large NaI(Tl) detectors to fast neutrons . . . . . 216 (1983) 141
- Van Silfhout, R., see Tamminga . . . . . 218 (1983) 107
- Van Staa, R., see Büngener . . . . . 214 (1983) 261
- Van Staa, R., see Büngener . . . . . 217 (1983) 254
- Van Tonder, B.J.E., see Friedland . . . . . 218 (1983) 658
- Van Tyen, R., see Aihara . . . . . 217 (1983) 259
- Van Zwol, N.A., see Strasters . . . . . 220 (1984) 109
- Van Zwol, N.A., see Van der Borg . . . . . 220 (1984) 115
- Vandenbosch, R., see Cramer . . . . . 220 (1984) 204
- Vanderspek, R.K., see Vallergera . . . . . 213 (1983) 145
- Vankov, I.D., G.S. Ganev, R.M. Ivanov and M. Müller, Self adapting ratemeter . . . . . 214 (1983) 395
- Vänskä, L., R.J. Rosenberg and V. Pitkänen, An automatic gamma spectrometer for activation analysis . . . . . 213 (1983) 343
- Vapirev, E.I., P.S. Kamenov, V. Dimitrov and D. Balabanski, Resonance detectors for time experiments . . . . . 219 (1984) 376
- Varga, J.C., see Madey . . . . . 214 (1983) 401
- Varma, M.N. and J.W. Baum, Auger electron and characteristic energy loss spectra for electro-deposited americium-241 . . . . . 212 (1983) 493
- Vartanian, M.H., see Hailey . . . . . 213 (1983) 397
- Vartsky, D., K.J. Ellis, L. Wielopolski and S.H. Cohn, The spectral shape and the components of the background in in vivo neutron capture prompt gamma ray analysis . . . . . 213 (1983) 437
- Vasile, M.J., The velocity dependence of secondary ion yields . . . . . 218 (1983) 319
- Vater, P., see Grabez . . . . . 211 (1983) 209
- Vaughan, D., see Adam . . . . . 217 (1983) 291
- Va'vra, J., Measurement and simulation of the drift pulses and resolution in the micro-jet chamber . . . . . 217 (1983) 322
- Vávra, J., see Mikula . . . . . 211 (1983) 519
- Veaser, L.R., C.J. Maggiore and G.A. Reeves, Density measurements for thick-film laser targets . . . . . 215 (1983) 529
- Venema, W.Z., Time and energy measurement with charge integrating ADCs (*Letter to the Editor*) . . . . . 219 (1984) 257
- Venkataramaiah, P., see Sanjeeviah . . . . . 216 (1983) 231
- Venkova, T., see Lieder . . . . . 220 (1984) 363
- Ventura, E., see Perez Ferreira . . . . . 220 (1984) 37
- Ventura, E., see Fazzini . . . . . 220 (1984) 144
- Ventura, L., see Cozza . . . . . 215 (1983) 89
- Venus, W., see Bjelkhagen . . . . . 220 (1984) 300
- Verbeek, H., see Schneider . . . . . 218 (1983) 713
- Verghese, K., see Yacout . . . . . 220 (1984) 461
- Verheul, H., see Van Ruyven . . . . . 216 (1983) 141
- Verhey, L.K., see Koeleman . . . . . 218 (1983) 225
- Verhoeven, J., see Bruijn . . . . . 219 (1984) 603
- Verma, R., Profile deconvolution method for small computers . . . . . 212 (1983) 323
- Vermeer, A., see Strasters . . . . . 220 (1984) 109
- Vermeer, A., see Van der Borg . . . . . 220 (1984) 115
- Vervier, J., see Kuzminski . . . . . 217 (1983) 449
- Veyssiére, A., R. Bergère, P. Bourgeois, P. Carlos, J. Fagot, J.L. Fallou and P. Garganne, Extraction of a parasitic electron beam and its use for a tagged photon facility at the 600 MeV Saclay linac . . . . . 212 (1983) 61
- Videau, H., see Barbaro-Galtieri . . . . . 213 (1983) 223
- Videau, H., see Aihara . . . . . 217 (1983) 259
- Viesti, G., see Fabris . . . . . 216 (1983) 167
- Vignati, A., see Bizzarri . . . . . 215 (1983) 511
- Villa, F., Dimethylether: a low velocity, low diffusion drift chamber gas . . . . . 217 (1983) 273
- Villa, G., see Ubertaini . . . . . 217 (1983) 97

Villari, A., see Azaiez	211 (1983) 335
Villeneuve de Janti, P., see Baubillier	217 (1983) 205
Vincent, C.H., Optimum sample thickness for total cross section measurements ( <i>Letter to the Editor</i> )	219 (1984) 440
Vincent, C.H., Prior distributions for Bayesian estimations of positive quantities ( <i>Letter to the Editor</i> )	219 (1984) 259
Vincent, D.H., see Downing	218 (1983) 47
Virk, H.S., see Modgil	212 (1983) 367
Vismara, G., see Manarin	217 (1983) 335
Visocekas, R., M. Ouchene and B. Gallois, Tunneling afterglow and anomalous fading in dosimetry with $\text{CaSO}_4\text{:Dy}$ ( <i>Letter to the Editor</i> )	214 (1983) 553
Visschers, J.L., see Distelbrink	220 (1984) 433
Vitale, S., see Benso	217 (1983) 194
Vivitron Group, see Letournel	220 (1984) 133
Vlieks, A.E., M. Hilgemeier and C. Rolfs, Absolute beam intensity measurements with a 200 watt calorimeter	213 (1983) 291
Vodopianov, A.S., see Filatova	211 (1983) 353
Vogel, J.S., see Southon	219 (1984) 435
Von Borany, J., G. Mende and B. Schmidt, Ion implanted nuclear radiation detectors passivated with anodic silicon oxide	212 (1983) 489
Von Oertzen, W., see Lettau	213 (1983) 187
Von Seggern, H., see Kramer	213 (1983) 373
Von Wimmersperg, U., see Sellschop	218 (1983) 593
Vonach, H., see Chalupka	217 (1983) 113
Vonach, H., see Traxler	217 (1983) 121
Vorobiev, S.A., see Golovkov	212 (1983) 167
Voronin, A.S., see Chepigin	220 (1984) 419
Vourvopoulos, G., T. Paradellis and A. Asthenopoulos, Utilization of the high current capability of the Demokritos tandem	220 (1984) 23
Vovenko, A.S., V.G. Platonov, K.E. Shestermanov, A.A. Spiridonov and V.P. Zhigunov, Energy resolution and structure of a calorimeter	212 (1983) 155
Vranic, D., see De Marzo	217 (1983) 405
Wada, T., see Iga	213 (1983) 531
Wagenaar, J.P., see Van der Graaf	217 (1983) 330
Wagenaar, J.P., see Van der Graaf	217 (1983) 357
Wagner, A., Applications of focused ion beams	218 (1983) 355
Wagner, C.N.J., see Nissenbaum	213 (1983) 27
Wagner, P., see Letournel	220 (1984) 10
Wagner, R., see Spinka	211 (1983) 239
Wagner, R., see Areti	212 (1983) 135
Wagner, R.L., see Cox	219 (1984) 487
Wagner, R.L., see Cox	219 (1984) 491
Wagoner, D.E., see Cox	219 (1984) 487
Wagoner, D.E., see Cox	219 (1984) 491
Wahlen, H., see Albanese	212 (1983) 111
Waibel, E. and B. Grosswendt, Spatial energy dissipation profiles, $W$ values, backscatter coefficients, and ranges for low-energy electrons in methane	211 (1983) 487
Wakuta, Y., see Hasuyama	216 (1983) 525
Waldner, F., see De Marzo	217 (1983) 405
Walenta, A.H., State-of-the-art and application of wire chambers	217 (1983) 65
Walker, R.P., Electron beam focussing effects and matching conditions in plane periodic magnets	214 (1983) 497
Wallucks, W., see Albanese	212 (1983) 111
Walter, G., see Wisshak	219 (1984) 136
Walter, R.L., see Dixon	213 (1983) 525
Walther, D. see Klein	220 (1984) 200
Walton, L., see Bjelkhagen	220 (1984) 300
Wands, R., see Minemura	219 (1984) 472
Wang, G.H., P.J. Cong, W.M. Gibson, C.R. Sun, I.J. Kim, S. Salman, M. Pisharody, S.I. Baker, R.A. Carrigan, Jr., J.S. Forster and I.V. Mitchell, Ion channeling study of radiation induced defects in a bent silicon crystal	218 (1983) 669
Wang, Y.-L., see Levi-Setti	218 (1983) 368
Wang Zuoyuan, see Kahn	219 (1984) 419
Wang, Z.L., J.F.M. Westendorp and F.W. Saris, An investigation of oxygen indiffusion during laser cleaning/annealing of silicon by means of the $^{16}\text{O}(\alpha, \alpha_0)^{16}\text{O}$ resonance scattering	211 (1983) 193

Wapstra, A.H., see Cohen	211 (1983) 153
Warren, G., see Andrews	211 (1983) 47
Warren, G.J., see Ing	219 (1984) 41
Watanabe, N., see Carpenter	213 (1983) 311
Watanabe, S.-I., see Kokame	213 (1983) 317
Watanabe, T., see Mori	211 (1983) 407
Watanabe, T., see Mori	211 (1983) 429
Watanabe, T., see Aoyama	212 (1983) 281
Watanabe, Y., see Spinka	211 (1983) 239
Watase, Y., see Arai	214 (1983) 209
Watase, Y., see Arai	217 (1983) 181
Watson, E., see Albanese	212 (1983) 111
Watson, J.W., see Madey	214 (1983) 401
Watson, J.W., B.D. Anderson, A.R. Baldwin, C. Lebo, B. Flanders, W. Pairsuwan, R. Madey and C.C. Foster, A comparison of methods for determining neutron detector efficiencies at medium energies	215 (1983) 413
Watson, R.L., see Maurer	214 (1983) 117
Watts, S.J., see Bailey	213 (1983) 201
Waugh, A.R., see Bayly	218 (1983) 375
Waurick, G., see Benichou	214 (1983) 245
Wayne, M., see Aihara	217 (1983) 259
Waysand, G., see Hrisoho	214 (1983) 415
Weathersby, P.K., S.S. Survanshi and P. Meyer, Spatial sensitivity of a planar positron camera	220 (1984) 571
Webb, R.P. and D.E. Harrison, Jr., Bombardment induced cascade mixing and the importance of post-cascade relaxation	218 (1983) 697
Webb, R.P., see Harrison, Jr.	218 (1983) 727
Weber, D., see Andrews	211 (1983) 47
Weber, J., see Van Driel	215 (1983) 113
Weber, T., see Drexler	220 (1984) 409
Wegener, D., see Drescher	216 (1983) 35
Weihls, W., see Becker	213 (1983) 243
Weiland, T., Transverse beam cavity interaction. Part I: Short range forces	212 (1983) 13
Weiland, T., Comment on wake field computation in time domain	216 (1983) 31
Weiland, T., On the computation of resonant modes in cylindrically symmetric cavities	216 (1983) 329
Weilhammer, P., see Belau	214 (1983) 253
Weinig, A., see Mathews	213 (1983) 155
Weipert, A., see Böttcher	219 (1984) 369
Weis, T., see Klein	220 (1984) 200
Weiser, M., see Damjantschitsch	218 (1983) 129
Weiser, M., see Frech	218 (1983) 500
Weisser, D.C., see Ophel	217 (1983) 383
Weissman, L.J., see Sobottka	220 (1984) 575
Weller, A., see Krämer	220 (1984) 123
Weller, A. and P. Egelhof, A large solid angle ionization chamber with ring counter geometry	220 (1984) 425
Weller, M.R., Dose dependence in angular distributions of Ag and Au sputtered from an alloy target	212 (1983) 419
Weller, R.A., see O'Connor	218 (1983) 293
Wells, W.K., see Westerafeldt	219 (1984) 284
Wen, S.L. and C.F. He, A new approach to the radiation hardness of BGO	219 (1984) 333
Wender, S.A., see Robertson	214 (1983) 541
Wender, S.A., G.F. Auchampaugh, J.F. Wilkerson, N.W. Hill, L.R. Nilsson and N.R. Roberson, A high-energy gamma-ray detector system for fast neutron-induced reactions	220 (1984) 371
Wenig, S., see Eckardt	213 (1983) 217
Wenzel, W.A., see Barbaro-Galtieri	213 (1983) 223
Wenzel, W.A., see Aihara	217 (1983) 259
Werner, K., see Kiselev	220 (1984) 399
Werner, R.D., see Jorch	218 (1983) 703
Westendorp, J.F.M., see Wang	211 (1983) 193
Westendorp, J.F.M., see Notermans	215 (1983) 555
Westerafeldt, C.R., E.G. Bilpuch, M.E. Bleck, D.A. Outlaw, W.K. Wells, J.F. Wilkerson and T.B. Clegg, A system for producing high-resolution polarized and unpolarized beams with a tandem accelerator	219 (1984) 284
Weston, L.W., see Todd	219 (1984) 575
Wetherell, A.M., see Jonker	215 (1983) 361



- Weygand, D.P., see Albrow . . . . . 214 (1983) 201
- Whalley, M., see Albanese . . . . . 212 (1983) 111
- Wheatley, G.H., see Buck . . . . . 218 (1983) 257
- Wheeler, C.D., see Eiseman . . . . . 217 (1983) 140
- White, M., see Becker . . . . . 214 (1983) 525
- White, J.T., see Van Driel . . . . . 215 (1983) 113
- White, R.M., see Haight . . . . . 212 (1983) 245
- Whitlow, H.J., see Andersen . . . . . 218 (1983) 468
- Whitlow, H.J., see Böttiger . . . . . 218 (1983) 684
- Whitton, J.L., see Besenbacher . . . . . 218 (1983) 551
- Wiatrowski, E., see Benichou . . . . . 214 (1983) 245
- Wichert, Th., M. Deicher, G. Lindner, H. Hofsäss and E. Recknagel, Probing of lattice defects by radioactive atoms . . . . . 218 (1983) 633
- Wickens, F.J., see Bailey . . . . . 213 (1983) 201
- Wiedner, C.A., see Sobie . . . . . 219 (1984) 501
- Wiegand, C.E., see Jaklevic . . . . . 214 (1983) 517
- Wielopolski, L., see Vartsky . . . . . 213 (1983) 437
- Wieluński, L., see Lien . . . . . 213 (1983) 463
- Wielunski, L.S., R.E. Benenson and W.A. Lanford, Helium-induced hydrogen recoil analysis of metallurgical applications . . . . . 218 (1983) 120
- Wieluński, M., see Głowacka . . . . . 216 (1983) 303
- Wietbrock, W., see Dietrich . . . . . 217 (1983) 160
- Wiggers, L., see Daum . . . . . 217 (1983) 361
- Wiggins, M.D., see Pellin . . . . . 218 (1983) 771
- Wikne, J.C., A CAMAC datarate supervision module . . . . . 216 (1983) 161
- Wikner, V.C., see McMurray . . . . . 219 (1984) 29
- Wilcke, R., see Ehrlich . . . . . 211 (1983) 17
- Wilcke, R., see Andrews . . . . . 211 (1983) 47
- Wilcke, R., see Kubota . . . . . 217 (1983) 249
- Wilke, W., see Drexler . . . . . 220 (1984) 409
- Wilkerson, J.F., see Westerfeldt . . . . . 219 (1984) 284
- Wilkerson, J.F., see Wender . . . . . 220 (1984) 371
- Willemssen, M.F.C., see Tamminga . . . . . 218 (1983) 107
- Williams, D.A., see Albanese . . . . . 212 (1983) 111
- Williams, F.H., J.M. Smith and R.R. Baerwolf, Contrast enhancement of fission fragment tracks for automatic counting by image analyzing microscopes (*Letter to the Editor*) . . . . . 220 (1984) 585
- Williams, J.S., see Rossiter . . . . . 218 (1983) 639
- Williams, P., K.M. Sika, J.A. Davies and T.E. Jackman, Quantitative SIMS analysis of hydrogenated amorphous silicon using superimposed deuterium implant standards . . . . . 218 (1983) 299
- Williams, O.R., see Benichou . . . . . 214 (1983) 245
- Williams, R.S. and J.A. Yarmoff, Surface structure analysis from low-energy ion backscattering angular distributions . . . . . 218 (1983) 235
- Williams, W.S.C., see Albanese . . . . . 212 (1983) 111
- Willis, W., see Fabjan . . . . . 216 (1983) 105
- Willis, W.J., see Carosi . . . . . 219 (1984) 311
- Willmott, C., see Becker . . . . . 220 (1984) 338
- Willutzki, H.-J., see Toki . . . . . 219 (1984) 479
- Wilson, R., see Andrews . . . . . 211 (1983) 47
- Wilson, S.L., see Sandoval . . . . . 216 (1983) 171
- Wimpenny, S., see Albanese . . . . . 212 (1983) 111
- Winberg, M.J., see Aarnio . . . . . 219 (1984) 173
- Winchester, T., see Dalglish . . . . . 218 (1983) 7
- Windmolders, R., see Albanese . . . . . 212 (1983) 111
- Winkler, G., see Christmas . . . . . 215 (1983) 397
- Winklmüller, G., see Albanese . . . . . 212 (1983) 111
- Winogard, N., see Kimock . . . . . 218 (1983) 287
- Winter, G., The application of lineshape analysis in plunger measurements (*Letter to the Editor*) . . . . . 214 (1983) 537
- Winter, K., see Harigel . . . . . 216 (1983) 355
- Winter, K., see Bénichou . . . . . 217 (1983) 163
- Wio, H., see Cáceres . . . . . 219 (1984) 441

- Wisniewski, W., see Toki . . . . . 219 (1984) 479
- Wisshak, K., see Faust . . . . . 213 (1983) 277
- Wisshak, K., G. Walter and F. Käppeler, Self-absorption of neutron capture gamma-rays in gold samples . . . . . 219 (1984) 136
- Wissink, S.W., see Dunham . . . . . 219 (1984) 46
- Witten, T.R., see Madey . . . . . 214 (1983) 401
- Wittmaack, K., The effect of the angle of incidence on secondary ion yields of oxygen-bombarded solids . . . . . 218 (1983) 307
- Wittmaack, K., Background formation in SIMS analysis of hydrogen, carbon, nitrogen and oxygen in silicon . . . . . 218 (1983) 327
- Witzeling, W., see Carosi . . . . . 219 (1984) 311
- Włodarczyk, J.J., see Kotlicki . . . . . 213 (1983) 565
- Wodrich, W.R., see Ahmad . . . . . 217 (1983) 169
- Wójcik, M. and L. Morawska, Radon concentration and exhalation measurement with a semiconductor detector and an electrostatic precipitator working in a closed circulation system : . . . . 212 (1983) 393
- Wojtasiewicz, A., see Kotlicki . . . . . 213 (1983) 565
- Wojtkowska, J., see Filatova . . . . . 211 (1983) 353
- Wojtkowska, J., see Filatova . . . . . 215 (1983) 135
- Wolf, G., see Albanese . . . . . 212 (1983) 111
- Wolf, G.K., see Frech . . . . . 218 (1983) 500
- Wood, D.R., see Ricker . . . . . 213 (1983) 133
- Woodard, S.E., see Haight . . . . . 212 (1983) 245
- Woods, C.J., see Cowern . . . . . 216 (1983) 287
- Woods, S.A., see Eastham . . . . . 220 (1984) 90
- Woody, C., see Carosi . . . . . 219 (1984) 311
- Wooff, C., Calibration of histograms in nuclear structure physics . . . . . 214 (1983) 419
- Worthington, J., see Freedman . . . . . 215 (1983) 71
- Wozniak, G.J., see McDonald . . . . . 219 (1984) 508
- Wriedt, P., see Böttiger . . . . . 218 (1983) 684
- Wu, C.S., see Chirovsky . . . . . 219 (1984) 103
- Wu, M.F., D. Schroyen, H. Pattyn and G. Langouche, Investigation of damage produced by self-implantation of tellurium . . . . . 218 (1983) 652
- Wu, Z.L., see Merz . . . . . 213 (1983) 51
- Wurth, R., see Danilov . . . . . 217 (1983) 153
- Wylie, A., see Belau . . . . . 214 (1983) 253
- Wylie, A., see Belau . . . . . 217 (1983) 224
- Wyly, L.D., see Lewis . . . . . 211 (1983) 371
- Xia Jin-Zhi, see Jiang Bin-Yao . . . . . 213 (1983) 179
- Xu, Z.-W., see Cheng . . . . . 218 (1983) 601
- Yabuuchi, Y., see Oura . . . . . 218 (1983) 253
- Yacout, A.M., R.P. Gardner and K. Verghese, Cubic spline techniques for fitting X-ray cross sections . . . . . 220 (1984) 461
- Yadagiri Reddy, P., P. Narayan Reddy, Ch. Seshakumari and K. Rama Reddy, On the transfer function of an electromechanical transducer: an application to the Mössbauer velocity drive . . . . . 213 (1983) 381
- Yadav, J.S., Phosphate glass detectors . . . . . 215 (1983) 315
- Yadav, J.S., see Kumar . . . . . 215 (1983) 535
- Yadav, J.S., see Kukreja . . . . . 219 (1984) 196
- Yamada, K., see Niimura . . . . . 211 (1983) 203
- Yamada, R., see Minemura . . . . . 219 (1984) 472
- Yamagiwa, T., see Minemura . . . . . 219 (1984) 472
- Yamaguchi, S., Y. Fujino, S.Nagata, H. Kaneko, K. Hashimoto and M. Hirabayashi, Analysis of hydrogen in corrosion product films on amorphous alloy using the elastic recoil detection technique . . . . . 218 (1983) 598
- Yamaguchi, S., see Fujino . . . . . 218 (1983) 691
- Yamamoto, I., see Iga . . . . . 213 (1983) 531
- Yamamoto, S., see Iida . . . . . 212 (1983) 413
- Yamamoto, S.S., see Fujii . . . . . 215 (1983) 357
- Yamamoto, Y., see Abe . . . . . 220 (1984) 293
- Yamashita, A., see Kamon . . . . . 213 (1983) 261
- Yamashita, M. and S. Takeuchi, Tube-to-tube variations in time distribution of afterpulses in high gain first dynode PMTs . . . . . 219 (1984) 353
- Yamashita, Y., see Iga . . . . . 213 (1983) 531
- Yamauchi, M., see Aihara . . . . . 217 (1983) 259
- Yamazaki, T., see Fujita . . . . . 217 (1983) 441

Yamazaki, T., see Koori	220 (1984) 453
Yang, T.-C., see Cheng	218 (1983) 601
Yan, Ya., see Exnerova	217 (1983) 425
Yao, Z.Q., see McDonald	219 (1984) 508
Yarmott, J.A., see Williams	218 (1983) 235
Yasuda, T., see Abe	220 (1984) 293
Yasue, M., see Kokame	213 (1983) 317
Yasuhara, M., see Iwata	219 (1984) 123
Yasuni, S., see Shima	217 (1983) 515
Yasuoka, K., see Abe	220 (1984) 293
Ye, C.H., see Becker	214 (1983) 525
Ye, C.H., see Becker	220 (1984) 338
Yee, K., see Becker	214 (1983) 525
Yeh, I.R., see Zhang	214 (1983) 391
Yelon, W.B., see Levi	213 (1983) 31
Yon, F., see Middleton	218 (1983) 430
Yntema, J.L. and P.J. Billquist, The Argonne inverted sputter source	220 (1984) 107
Yntema, J.L., see Kutscheira	220 (1984) 118
Yokosawa, A., see Spinka	211 (1983) 239
Yoneda, K., see Fujine	215 (1983) 277
Yoshida, M., see Iida	212 (1983) 413
Yoshimori, M., K. Okudaira, Y. Hirasima and I. Kondo, Gamma-ray spectrometer aboard solar flare observation satellite HINOTORI	215 (1983) 255
Yoshino, M., see Hayashide	216 (1983) 127
Yoshuoka, M., see Tanimori	216 (1983) 57
Yoshizaki, R., see Minemura	219 (1984) 472
Yoshizawa, Y., Y. Iwata, T. Katoh, J.-Z. Ruan and Y. Kawada, Precision measurements of gamma-ray intensities. IV. Low energy region: $^{75}\text{Se}$ and $^{133}\text{Ba}$	212 (1983) 249
Yoshizawa, Y., see Jin	212 (1983) 259
Yoshizawa, Y., see Iwata	219 (1984) 123
Youl, S., see Eisler	214 (1983) 421
Young, C.E., see Pellin	218 (1983) 771
Young, I.L., see Devito	215 (1983) 423
Young, K., see Adams	217 (1983) 237
Yü, L., see Luccio	219 (1984) 213
Yuan, V., see Bowman	216 (1983) 399
Yuge, Y., see Inada	218 (1983) 607
Yuriev, B.A., see Filatova	211 (1983) 353
Yurkov, M.V., see Nikitin	216 (1983) 317
Yurman, Y., see Hollos	220 (1984) 140
Zabaev, V.N., see Golovkov	212 (1983) 167
Zabel, T.H., see Donahue	218 (1983) 425
Zabel, T.H., see Jull	218 (1983) 509
Zach, A., see Mangeot	216 (1983) 79
Zandins, C.S., see Clapier	217 (1983) 489
Zanevsky, Yu.V., see Abdushukurov	217 (1983) 101
Zank, P., see Albanese	212 (1983) 111
Zankl, G., see Strachan	214 (1983) 551
Zanotti, U., see Battistoni	219 (1984) 300
Zavedia, A.A., see Agamalyan	213 (1983) 489
Zavrtanik, D., see Kernel	214 (1983) 273
Zavrtanik, D., see Starić	216 (1983) 67
Zech, G., see Becker	213 (1983) 243
Zech, G., Electrodeless drift chambers	217 (1983) 209
Zegenhagen, J., see Krolzig	219 (1984) 430
Ziegler, N.F., see Jones	220 (1984) 1
Zeitnitz, B., see Klages	219 (1984) 269
Zeller, M.E., see Aihara	217 (1983) 259
Zephat, A.G., see Kernel	214 (1983) 273



- Zhang, H.X., T.R. Yeh and H. Lancman, Automatic scanning of solid state nuclear track detectors at low track density . . . . . 214 (1983) 391
- Zhang, W.-M., see Aihara . . . . . 217 (1983) 259
- Zhigunov, V.P., see Vovenko . . . . . 212 (1983) 155
- Zhigunov, V.P., Improvement of resolution function as an inverse problem . . . . . 216 (1983) 183
- Zhou, Z.-Y., see Cheng . . . . . 218 (1983) 601
- Ziegler, G., see Chalupka . . . . . 217 (1983) 113
- Ziegler, J.F., see Baglin . . . . . 218 (1983) 445
- Ziegler, J.F., see Saunders . . . . . 218 (1983) 67
- Ziegler, K., see Busse . . . . . 220 (1984) 26
- Zimin, N.I., see Filatova . . . . . 211 (1983) 353
- Ziock, K.O.H., see Kernel . . . . . 218 (1983) 271
- Zioutas, K., see Blüm . . . . . 218 (1983) 253
- Zioutas, K., see Suffert . . . . . 218 (1983) 10
- Ziv, A.R., B.V. King, S.H. Lin and I.S.T. Tsong, Kinetic energy distributions of sputtered particles in non-cascade sputtering processes . . . . . 218 (1983) 32
- Zorn, C.J., see Hartner . . . . . 216 (1983) 115
- Zrelov, V.P., M. Klimanova, V.P. Lupiltsev and J. Ružička, Calculations of threshold characteristics of Vavilov-Cherenkov radiation emitted by ultrarelativistic particles in a gaseous Cherenkov counter . . . . . 211 (1983) 16
- Zucchiatti, A., see Taiuti . . . . . 211 (1983) 135
- Zucchiatti, A., see Capitani . . . . . 216 (1983) 9
- Zumerle, G., see Cozza . . . . . 211 (1983) 29
- Zupancić, Č., see Navarria . . . . . 212 (1983) 125
- Zurbuchen, R., see Anders . . . . . 211 (1983) 67
- Zurbuchen, R., see Anders . . . . . 219 (1984) 66
- Zwang, N., see Breskin . . . . . 211 (1983) 107
- Zych, R.S., see Mikesell . . . . . 218 (1983) 55



## SUBJECT INDEX TO VOLUMES 211-220

### Accelerators, Beam Handling and Targets

An improved method for producing negative ion beams from the group IIA elements for tandem Van de Graaff applications, Alton, G.D. and J.A. Benjamin	211 (1983) 1
Etalonnage d'un channeltron en vue de son application à la spectrométrie de masse, Ravon, J.P.	211 (1983) 7
High speed rotating vacuum seal ( <i>Letter to the Editor</i> ), Garibaldi, J.L. and C.M. Logan	211 (1983) 213
Ligne de transfert achromatique à longueur équivalente fortement négative ( <i>Letter to the Editor</i> ), Roussel, P. et J.M. De Coster	211 (1983) 215
Beam polarization at the ZGS, Spinka, H., E. Colton, W.R. Ditzler, H. Halpern, K. Imai, R. Stanek, N. Tamura, G. Theodosiou, K. Toshioka, D. Underwood, R. Wagner, Y. Watanabe, A. Yokosawa, G.R. Burleson, W.B. Cottingame, S.J. Greene, S. Stuart and J.J. Jarmer	211 (1983) 239
Simulation of the beam-beam effect for $e^+e^-$ -storage rings, Myers, S.	211 (1983) 263
Optimization on the end-shaping of a quadrupole magnet, Kumada, M., H. Sasaki, H. Someya and I. Sakai	211 (1983) 283
Comparison between solid graphite and graphite cloth as a target backing material for an ISOL system, Shmid, M., R.L. Gill and C. Chung	211 (1983) 287
Electrodeposition of Pt and Os targets for nuclear reaction experiments, Stuchbery, A.E.	211 (1983) 293
A real-time neutron beam monitor, Becker, J.A.	211 (1983) 297
Production of intense beams of polarized negative hydrogen ions by double charge exchange in alkali vapour, Gruebler, W. and P.A. Schmelzbach	212 (1983) 1
The application of the electron-cyclotron resonance source to Lamb-shift polarized ion sources, Clegg, T.B., P.W. Schmor, C. Jacquot, M. Delaunay, J.C. Rocco, R. Geller and G. Roy	212 (1983) 5
Transverse beam cavity interaction. Part I: Short range forces, Weiland, T.	212 (1983) 13
Transverse wakefield calculations, Aharonian, G., R. Meller and R.H. Siemann	212 (1983) 23
Simultaneous treatment of betatron and synchrotron motions in circular accelerators, Corsten, C.J.A. and H.L. Hagedoorn	212 (1983) 37
Some applications of a general theory on coupling between transverse and longitudinal oscillation modes in circular accelerators, Corsten, C.J.A. and H.L. Hagedoorn	212 (1983) 47
Sur une méthode d'étude de la dynamique des particules traversant l'espace accélérateur d'un cyclotron, Thouroude, D. et A. Durand	212 (1983) 53
Extraction of a parasitic electron beam and its use for a tagged photon facility at the 600 MeV Saclay linac, Veyssière, A., R. Bergère, P. Bourgeois, P. Carlos, J. Fagot, J.L. Fallou and P. Garganne	212 (1983) 61
The quarter wave resonator as a superconducting linac element, Ben-Zvi, I. and J.M. Brennan	212 (1983) 73
Optical behaviour of acceleration tubes studied in bremsstrahlung measurements, Kiss, Á.Z., E. Koltay, Gy. Szabó and J. Féltszerfalvi	212 (1983) 81
Low-energy separated beam K3 at KEK, Kurokawa, S., H. Hirabayashi and E. Kikutani	212 (1983) 91
A differentially pumped supersonic jet gas target for low-energy nuclear reaction experiments, Treichel, M., R. Isenbügel and N. Marquardt	212 (1983) 101
The new high intensity polarized proton and deuteron source for the Bonn isochronous cyclotron, Mathews, H.-G., A. Kruger, S. Penselin and A. Weinig	213 (1983) 155
Essais de production d'ions métalliques dans la source d'ions multichargés Minimaños, Delaunay, M., S. Dousson, R. Geller et B. Jacquot	213 (1983) 165
Charged particle beam envelopes, Shpak, E.V.	213 (1983) 171
Equation d'enveloppe pour un faisceau accéléré par un champ électrostatique à symétrie de révolution, Jiang Bin-Yao, P. Tanguy et Xia Jin-Zhi	213 (1983) 179
Precise angular distribution measurements for high energetic ions, Lettau, H., H.G. Bohlen, H. Rossner, W. Von Oertzen and M. Martin	213 (1983) 187
Design of a passive magnetic shunt for the extraction of electron beams from a photon tagging spectrometer, Laszewski, R.M.	213 (1983) 195
Some remarks on the spiral orbit spectrometer ( <i>Letter to the Editor</i> ), Faust, H.R. and F. Blönnigen	213 (1983) 545
A versatile high intensity negative ion source, Middleton, R.	214 (1983) 139
A pulsed surface muon beam/pion beam for the Rutherford Appleton Laboratory spallation neutron source, Eaton, G.H., A. Carne, D.H. Reading and E.G. Sandels	214 (1983) 151



- A novel design for a fast intense neutron beam, Bol, A., P. Leleux, P. Lipnik, P. Macq and A. Ninane . . . . . 214 (1983) 169
- Fast kicker magnet system, Lindgren, L.J., A. Sandell and M. Eriksson . . . . . 214 (1983) 175
- Injection and extraction at MAX, Lindgren, L.J. and M. Eriksson . . . . . 214 (1983) 179
- A superconducting accelerating cavity in PETRA, Bauer, W., A. Brandelik, A. Citron, F. Graf, L. Szecsi and D. Proch . . . . . 214 (1983) 189
- Ionization in a hot cavity, Huyse, M. . . . . 215 (1983) 1
- Poly-C Van de Graaff belts, Norbeck, E. and M.D. Strathman . . . . . 215 (1983) 7
- Geometric aberration correction in ion lenses – the Caledonian quadruplet, Dalglish, R.L., A.M. Smith and S. Hughes . . . . . 215 (1983) 9
- Magnetic field measurement of the JAERI heavy-ion spectrograph "ENMA", Sugiyama, Y., N. Shikazono, T. Sato and H. Ikegami . . . . . 215 (1983) 17
- Electron cooling, Sørensen, A.H. and E. Bonderup . . . . . 215 (1983) 27
- Deceleration of highly stripped ions by the Heidelberg postaccelerator, Ingwersen, H., E. Jaeschke and R. Repnow . . . . . 215 (1983) 55
- Preparation of ruthenium targets for high resolution charged-particle reaction spectroscopy, Koide, K., F.C. Sampaio, E.M. Takagui, J.H. Hirata and O. Dietzsch . . . . . 215 (1983) 61
- Irradiated ammonia (NH<sub>3</sub>) as target material for polarized proton targets, Meyer, W., K.H. Althoff, W. Havenith, H. Riechert, E. Schilling and G. Sternal . . . . . 215 (1983) 65
- Voltage calculations for a single-ended Van de Graaff machine with secondary breakdowns, Staniforth, J.A. . . . 216 (1983) 1
- A device for increasing the insulating strength of an electrostatic accelerator column, Rezvykh, K.A. and V.A. Romanov . . . . . 216 (1983) 11
- Re-adjustment and modifications to a previous method of externally pulsing an accelerator, Eskandari, M.R. and P.N. Cooper . . . . . 216 (1983) 15
- Radial oscillation analysis by internal beam pulse TOF measurements at the Hamburg Isochronous Cyclotron, Langkau, R., H. Krause, W. Peters, N. Schirm and W. Scobel . . . . . 216 (1983) 19
- Stopband widths in non-linear sum resonances, Corsten, C.J.A. and H.L. Hagedoorn . . . . . 216 (1983) 25
- Comment on wake field computation in time domain, Weiland, T. . . . . 216 (1983) 31
- The LEALE photon beam facility at Frascati, obtained by positron annihilation on a liquid hydrogen target, Capitani, G.P., E. De Sanctis, C. Guaraldo, P. Di Giacomo, V. Lucherini, E. Polli, A.R. Reolon, R. Scrimaglio, M. Anghinolfi, P. Corvisiero, G. Ricco, M. Sanzone and A. Zucchiatti . . . . . 216 (1983) 307
- Calculation of the depolarizing effect of the field imperfections in electron-positron storage rings, Nikitin, S.A., E.L. Saldin and M.V. Yurkov . . . . . 216 (1983) 317
- On the computation of resonant modes in cylindrically symmetric cavities, Weiland, T. . . . . 216 (1983) 329
- Target simulator for the study of target cooling, Bauwens, G., M. Cypres, A. Noblet and G. Sylin . . . . . 216 (1983) 349
- On the 20 K methane moderator and its applicability to an intense pulsed cold neutron source (*Letter to the Editor*) Inoue, K . . . . . 216 (1983) 537
- Aspects of breakdown product contamination of sulphur hexafluoride in electrostatic accelerators, Ophel, T.R., D.C. Weissner, A. Cooper, L.K. Fifield and G.D. Putt . . . . . 217 (1983) 383
- Acceleration of protons and deuterons polarized in the horizontal plane by the RCNP cyclotron, Hatanaka, K., N. Matsuoka, H. Sakai, T. Saito, H. Tamura, K. Hosono, M. Kondo, K. Imai, H. Shimizu and K. Nisimura . . 217 (1983) 397
- Production d'ions calcium dans la source d'ions multichargés ECR Minimafois, Geller, R. et B. Jacquot . . . . . 219 (1984) 1
- Colliding  $\gamma e$  and  $\gamma \gamma$  beams based on single-pass  $e^+e^-$  accelerators. II. Polarization effects, monochromatization improvement, Ginzburg, I.F., G.L. Kotkin, S.L. Panfil, V.G. Serbo and V.I. Telnov . . . . . 219 (1984) 5
- Coalescence of bunches in a synchrotron to change the acceleration harmonic number, Barton, M.Q. . . . . 219 (1984) 25
- A 0.2 ns beam pulse for the 6 MV Van de Graaff accelerator, McMurray, W.R., J.J. Kritzing, V.C. Wikner, T. Swart and H. Schmitt . . . . . 219 (1984) 29
- On the use of Soller collimators in surface muon beams, Eaton, G.H., M. Daum, R. Frosch and P.-R. Kettle . . 219 (1984) 34
- Identification of neutrons from the cooling water of a GeV electron accelerator, Ing, H., R.C. McCall, T.M. Jenkins and G.J. Warren . . . . . 219 (1984) 41
- Polarized gas jet targets, Dunham, J.S., C.S. Galovich, H.F. Glavish, S.S. Hanna, D.G. Mavis and S.W. Wissink . . 219 (1984) 46
- A new operating regime for CRYEBIS (*Letter to the Editor*), Faure, J., B. Feinberg, A. Courtois and R. Gobin . . 219 (1984) 243
- Improved extraction of zirconium and molybdenum beams from a Penning discharge ion source (*Letter to the Editor*), Lewis, M.B. . . . . 219 (1984) 247
- An ECR source of multiply charged ions HELIOS-12A, Dugar-Zhabon, V.D., K.S. Golovanivsky and S.A. Safonov . . . . . 219 (1984) 263
- POLKA – a polarized continuous energy neutron beam source at the Karlsruhe cyclotron, Klages, H.O., H. Dobiasch, P. Doll, H. Krupp, M. Oexner, P. Plischke, B. Zeitnitz, F.P. Brady and J.C. Hiebert . . . . . 219 (1984) 269
- QPAN – a quick polarization analyzer for neutrons, Hollas, C.L., R.D. Ransome, P.J. Riley, B.E. Bonner, J.G. Boissevain, T.S. Bhatia, G. Glass, J.C. Hiebert and W.B. Tipples . . . . . 219 (1984) 275
- Space charge effects in a heavy ion cyclotron, Chasman, C. and A.J. Baltz . . . . . 219 (1984) 279

A system for producing high-resolution polarized and unpolarized beams with a tandem accelerator, West-erfeldt, C.R., E.G. Bilpuch, M.E. Bleck, D.A. Outlaw, W.K. Wells, J.F. Wilkerson and T.B. Clegg . . . . .	219 (1984) 284
A high power liquid $^3\text{He}$ target system for electron scattering experiments, Postma, H., J.P. Boogaard, P.H.M. Keizer, L. Prins and K.P.A. De Witt Huberts . . . . .	219 (1984) 292
Synthesis of chromium (V) complex on the basis of deuterated ethanediol for a polarized deuteron target, Bunyatova, E.I. and N.N. Bubnov . . . . .	219 (1984) 297
The measurement of $^{10}\text{Be}$ with an accelerator at 3 MV ( <i>Letter to the Editor</i> ), Southon, J.R., J.S. Vogel, G. Richards and D.E. Nelson . . . . .	219 (1984) 435
A method for the preparation of $^{13}\text{C}$ targets by the cracking procedure ( <i>Letter to the Editor</i> ), Ramström, E. and B. Trostell . . . . .	219 (1984) 438
External ion injection into CRYEBIS, Faure, J., B. Feinberg, A. Courtois and R. Gobin . . . . .	219 (1984) 449
Système de centrage automatique pour un faisceau d'accélérateur, Coté, A., J. Pouliot, R. Labrie, R. Roy et R. Bertrand . . . . .	219 (1984) 456

*Proceedings of the Sixth Tandem Conference  
Chester, England, April 18–22, 1983*

**Section I. Status reports.** . . . . .

Status report on the Holifield Heavy Ion Research Facility, Jones, C.M., G.D. Alton, J.B. Ball, J.A. Benjamin, J.A. Biggerstaff, K.A. Erb, E.D. Hudson, R.C. Juras, P.K. Kloeppel, R.S. Lord, C.A. Ludemann, J.E. Mann, J.A. Martin, S.W. Mosko, E.G. Richardson, R.O. Sayer and N.F. Ziegler . . . . .	220 (1984) 1
Second step of the upgrading of the Strasbourg MP (16–18 MV), Letournel, M., J.C. Oberlin, G. Heng, J. Heugel and P. Wagner . . . . .	220 (1984) 10
Progress report on the Laboratorio Nazionale del Sud (LNS) at Catania, Migneco, E. . . . .	220 (1984) 14
Utilization of the high current capability of the Demokritos tandem, Vourvopoulos, G., T. Paradellis and A. Asthenopoulos . . . . .	220 (1984) 23
Progress of the VICKSI-tandem injector project, Busse, W., J.D. Larson, R. Michaelsen, W. Pelzer, D. Renner, B. Spellmeyer and K. Ziegler . . . . .	220 (1984) 26
Acceptance tests of the Legnaro XTU tandem, Signorini, C., G. Bezzon, F. Cervellera, P. Spolaore and R.A. Ricci . . . . .	220 (1984) 30
The Buenos Aires tandem accelerator facility, Perez Ferreira, E., E. Achterberg, D. Camin, A. Ceballos, N. Fazzini, A. Filevich, H. Gonzalez, A. Jech, M.A.J. Mariscotti, J. Milberg, J. Nicolai, R. Requejo, R. Ribarich, J.J. Rossi, S. Tau, A. Tersigni, J. Testoni and E. Ventura . . . . .	220 (1984) 37
The Brookhaven double MP facility: recent developments and plans for the future, Thieberger, P. . . . .	220 (1984) 45
A review of the commissioning and initial operation of the NSF tandem accelerator, Tait, N.S.R. . . . .	220 (1984) 54

**Section II. Operational problems, accelerator tubes**

Breakdown mechanism and time development of discharges in compressed insulating gases, Pfeiffer, W. . . . .	220 (1984) 63
Recent developments in vacuum breakdown and discharge physics relevant to accelerator tube design, Chatterton, P.A. . . . .	220 (1984) 73
Accelerator tube tests with a 5 MV Van de Graaff, Korschinek, G., J. Held, A. Isoya, W. Assmann and H. Münzer . . . . .	220 (1984) 82
Test of NEC tubes in compressed geometry, Assmann, W., G. Korschinek and H. Münzer . . . . .	220 (1984) 86
A study of the NSF laddertron, Eastham, D.A., P.S. Powell, R. Thorn, S.L. Ooi and S.A. Woods . . . . .	220 (1984) 90
Breakdown calculations following spark breakdown in a tandem machine, Staniforth, J.A. . . . .	220 (1984) 93
Large diameter melting by sparks, James, A.N. . . . .	220 (1984) 96
Voltage limitations of electrostatic accelerators, Eastham, D.A. . . . .	220 (1984) 101

**Section III. Ion sources**

A versatile high intensity negative ion source, Middleton, R. . . . .	220 (1984) 105
The Argonne inverted sputter source, Yntema, J.L. and P.J. Billquist . . . . .	220 (1984) 107
Improvements in ANIS and inverted sputter sources, Strasters, B.A., A. Vermeer and N.A. van Zwol . . . . .	220 (1984) 109
The effect of the source optics and the temperature of the sputter surface on the negative ion yield of the sputter source MISS-4M, Matthes, H., W. Pfestorf and L. Steinert . . . . .	220 (1984) 112
The injector of the Utrecht EN tandem, Van der Borg, K., A.P. de Haas, A.M. Hoogenboom, B.A. Strasters, A. Vermeer and N.A. van Zwol . . . . .	220 (1984) 115
A search for doubly-charged negative ions via accelerator mass spectrometry, Kutschera, W., D. Frekers, R. Pardo, K.E. Rehm, R.K. Smither and J.L. Yntema . . . . .	220 (1984) 118

- The source of polarized heavy ions (PSI) at the Heidelberg MP tandem, Krämer, D., K. Becker, K. Blatt, R. Čaplar, D. Fick, H. Gemmeke, W. Haeberli, H. Jänsch, O. Karban, I. Koenig, L. Luh, K.-H. Möbius, V. Nečas, W. Ott, M. Tanaka, G. Tungate, I.M. Turkiewicz, A. Weller and E. Steffens . . . . . 220 (1984) 123

#### Section IV. New accelerators and accelerator instrumentation

- The Strasbourg project: a Vivitron of 35 MV, Letournel, M. and the Vivitron Group . . . . . 220 (1984) 133  
 Recent developments at the Rehovot 14UD pelletron, Hollos, G., R. Kaim, Y. Shachar and Y. Yurman . . . . . 220 (1984) 140  
 The SF<sub>6</sub> gas handling system for the Buenos Aires 20 MV accelerator, Fazzini, N., H. Gonzalez, J. Nicolai, R. Requejo, E. Ventura, G. Feimberg, G. Gidekel and P. Goldschmidt . . . . . 220 (1984) 144  
 Initial operating experience with beams at the Daresbury tandem, Aitken, T.W., T. Joy and H.G. Price . . . . . 220 (1984) 149  
 Charge state distribution of light heavy ions accelerated in a single ended Van de Graaff accelerator, Hunyadi, I., Á.Z. Kiss, I. Kiss, E. Koltay and Gy. Szabó . . . . . 220 (1984) 154  
 Study for a beam bunching system at LNS, Calabretta, L. and E. Migneco . . . . . 220 (1984) 158  
 The four gap double drift buncher at Munich, Rohrer, L., H. Jakob, K. Rudolph and S.J. Skorka . . . . . 220 (1984) 161  
 Improvement of the energy resolution of a time-of-flight neutron spectrometer by using a high energy RF buncher, Dei-Cas, R., J. Bardy, A. Courtain, A. Dandine, J.P. Gueguen, P. Jouy, J.P. Laget, J. Pottier, Y. de Penquer and M. Renaud . . . . . 220 (1984) 165  
 Remote real time oscilloscope displays for accelerator diagnostics on the tandem Van de Graaff at the Daresbury Laboratory, Beech, J.C., S.V. Davis, C.W. Horrabain, W.T. Johnstone, W. Silversides and K. Spurling . . . . . 220 (1984) 170

#### Section V. Post-accelerators

- Superconducting linacs used with tandems, Ben-Zvi, I. . . . . 220 (1984) 177  
 Superconducting cyclotrons as boosters for tandems, Trinks, U. . . . . 220 (1984) 186  
 The Florida State University post accelerator – progress report, Chapman, K.R. . . . . 220 (1984) 194  
 Upgrading of the single ended 7 MV Van de Graaf accelerator in Frankfurt, Klein, H., A. Schempp, J. Häuser, E. Müller, W. Rohrbach, D. Walther, T. Weis, K. Bethge, H. Baumann and K. Meinel . . . . . 220 (1984) 200  
 The University of Washington superconducting booster project, Cramer, J.G., D.W. Storm and R. Vandenbosch . . . . . 220 (1984) 204  
 Possible use of synchrotrons as post-acceleration boosters for tandems, Thieberger, P. . . . . 220 (1984) 209

#### Section VI. Other topics

- Radiocarbon and other radionuclide measurements by accelerator mass spectrometry, Hedges, R.E.M. . . . . 220 (1984) 211  
 New ideas for accelerating particles, Lawson, J.D. . . . . 220 (1984) 217

- Emittance calculations and measurements for a sputter-type negative-ion source, Billen, J.H. . . . . 220 (1984) 225  
 The LBL EBIS test-stand, Brown, I.G. and B. Feinberg . . . . . 220 (1984) 251  
 Measurement of electron polarization of optically pumped sodium atoms, Mori, Y., K. Ikegami, A. Takagi, S. Fukumoto and W.D. Cornelius . . . . . 220 (1984) 264  
 The truncated spherical mirror for energy analysis combined with direct measurement of angular distribution, Tremblay, D. and D. Roy . . . . . 220 (1984) 270  
 Thick osmium targets, Reuter, W., J.C. Gursky, E.B. Shera and M.W. Johnson . . . . . 220 (1984) 288  
 Proposed new method, simple and durable, for the production of highly polarized electrons (*Letter to the Editor*), Slobodrian, R.J. . . . . 220 (1984) 582

#### Instruments and Methods for High Energy Physics

- Particle identification by ionization measurements: description of the CLEO dE/dx system, Ehrlich, R., T. Gentile, Y. Kubota, S. Stone, R. Talman, R. Wilcke, M.S. Alam, S. Csorna, R.G. Hicks, R. Panvini and J. Poucher . . . . . 211 (1983) 17  
 The CLEO detector, Andrews, D., P. Avery, K. Berkelman, R. Cabenda, D.G. Cassel, J.W. DeWire, R. Ehrlich, T. Ferguson, B.G. Gibbard, M.G.D. Gilchriese, B. Gittelman, D.L. Hartill, D. Herrup, M. Herzlinger, J. Kandaswamy, D.L. Kreinick, D. Larson, N.B. Mistry, F. Morrow, E. Nordberg, R. Perchonok, R. Plunkett, K.A. Shinsky, R.H. Siemann, A. Silverman, P.C. Stein, S. Stone, R. Talman, D. Weber, R. Wilcke, C. Bereck, J. Haggerty, M. Hempstead, J.M. Izen, R. Kline, W.A. Loomis, W.W. MacKay, F.M. Pipkin, J. Rohlf, W. Tanenbaum, R. Wilson, A.J. Sadoff, D.L. Bridges, K. Chadwick, J. Chauveau, P. Ganci, T. Gentile, H. Kagan, R. Kass, F. Lobkowicz, A.C. Melissinos, S.L. Olsen, R. Poling, C. Rosenfeld, G. Rucinski, E.H. Thorndike, G. Warren, D. Bechis, G.K. Chang, J. Green, R. Imlay, M. Lieberman, J.J. Mueller, D. Potter, F.



- Sannes, P. Skubic, A. Snyder, R. Stone, A. Brody, A. Chen, M. Goldberg, N. Horwitz, M. Jibaly, H. Kooy, P. Larricia, P. Lipari, G.C. Moneti, H. Van Hecke, M.S. Alam, S.E. Csorna, R. Hicks, P.S. Panvini and J.S. Poucher ..... 211 (1983) 47
- A large-solid-angle spectrometer for high-energy electrons and photons, Breakstone, A.M., C.A. Heusch and A. Seiden ..... 211 (1983) 73
- Optoelectronic link for analog signals from solid state detectors in high energy physics, Manfredi, P.F. and V. Speziali ..... 211 (1983) 83
- A polarised high energy tagged photon beam, Bussey, P.J., C.N. Paterson, C. Raine, R.E. Hughes-Jones, G.D. Lafferty, J.B. Lane and D. Mercer ..... 211 (1983) 301
- Recent developments in wavelength shifters, Aurouet, C., H. Blumenfeld, M. Bourdinaud, C. Jeanney, C. Lafond and C. Perrin ..... 211 (1983) 309
- A segmented scintillator-lead photon calorimeter using a double wavelength shifter optical readout system, Fent, J., H. Fessler, P. Freund, H.J. Gebauer, P. Polakos, K.P. Pretzl, Th. Schouten, P. Seyboth and J. Seyerlein ..... 211 (1983) 315
- Proposal for a semiconductor high resolution tracking detector, Rehak, P. .... 211 (1983) 323
- Measurement of the coordinates of particle tracks by the centre of gravity of a light flash in a scintillator, Barabash, L.S., V.V. Chalyshev, I.E. Chirikov-Zorin, A.G. Fedunov, A.M. Kharin, L.V. Komogorova, E.I. Maltsev, N.M. Lustov and Yu.P. Petukhov ..... 211 (1983) 331
- Detection of small angle elastic scattering events at high energy based on a multiscintillator target, Azaiez, H., R. Birsá, F. Bradamante, S. Dalla Torre-Colautti, M. Di Drusco, M. Giorgi, K.-I. Kuroda, L. Lanceri, A. Martin, A. Michalowicz, P. Moras, A. Penzo, D. Perret-Gallix, P. Schiavon and A. Villari ..... 211 (1983) 335
- On the measurement of the momentum of 19 GeV/c electrons in a heavy liquid bubble chamber, Harigel, G., C. Baltay and M. Hibbs ..... 211 (1983) 343
- A spectrometer to study spontaneous radiation due to the channeling of high energy electrons and positrons in single crystals, Filatova, N.A., A. Forycki, I.I. Evsikov, V.M. Golovatyuk, Z. Guzik, I.M. Ivanchenko, R.B. Kadyrov, N.N. Karpenko, T.S. Nigmanov, V.V. Palchik, V.D. Riabtsov, A.E. Senner, M.D. Shafranov, V.A. Sutulin, E.N. Tsyganov, I.A. Tyapkin, A.S. Vodopianov, J. Wojtkowska, D.V. Uralsky, N.I. Zimin, R.A. Carrigan, Jr., T.E. Toohig, C.S. Carmack, W.M. Gibson, I.-J. Kim, C.-R. Sun, M.D. Bavizhev, N.K. Bulgakov, I.A. Grishaev, G.D. Kovalenko, B.I. Shramenko, E.I. Denisov, V.I. Tumanov, Y.V. Nilsen, B.A. Yuriev, V.V. Avdeichikov and A.N. Isakov ..... 211 (1983) 353
- The effect of radiation on the energy resolution of ion-implanted silicon detectors, Borgeaud, P., J.G. McEwen, P.G. Rancoita and A. Seidman ..... 211 (1983) 363
- A method for measuring the wire tensions in proportional and drift chambers, Coupland, M. .... 211 (1983) 369
- The vertex and large angle detectors of a spectrometer system for high energy muon physics, Albanese, J.P., O.C. Allkofer, M. Arneodo, J.J. Aubert, K.H. Becks, C. Bee, C. Benchouk, B. Bernaudin, Y. Bertsch, F. Bianchi, J. Bibby, I. Bird, D. Blum, E. Böhm, D. Botterill, X. De Bouard, F.W. Brasse, H. Braun, C. Broll, S. Brown, H. Brück, C. Callebaut, J. Carr, R. Clift, J.H. Cobb, G. Coignet, F. Combley, M. Cornelissen, F. Costa, J. Couhlan, G.R. Court, G. D'Agostini, W.D. Dau, J.K. Davies, A. Davis, F. Dengler, I. Derado, R.W. Dobinson, U. Dosselli, J. Drees, J.J. Dumont, V. Eckardt, A. Edwards, M. Edwards, G. Falley, J. Favier, M.I. Ferrero, J. Figiel, W. Flauger, E. Gabathuler, R. Gamet, J. Gayler, H.J. Gebauer, C. Gössling, J. Haas, F.J. Hasert, P. Hayman, P. Heusse, M. Jaffré, F. Janata, G. Jancso, A.S. Johnson, E.M. Kabuss, T. Kahl, G. Kellner, J. Koll, V. Korbel, J. Krüger, U. Landgraf, D. Lanske, M. Lebeau, J. Loken, M. Maire, A. Manz, M. Mermet-Guyennet, H. Minssieux, W. Mohr, F. Montanet, H.E. Montgomery, K. Moser, R.P. Mount, M. Moynot, H. Müller, E. Nagy, J. Nassalski, J.M. Noppe, P.R. Norton, A.M. Osborne, C. Pascaud, L. Paul, P. Payre, C. Peroni, G. Perrot, H. Pessard, J. Pettingale, M. Pötsch, H. Preissner, P. Renton, P. Ribarics, K. Rith, F. Röhner, E. Rondio, M.D. Rousseau, A. Schlagböhmer, N. Schmitz, A. Scaramelli, M. Schneegans, K. Schultze, M. Scory, J. Shiers, G. Singer, T. Sloan, R. Smith, M. Sproston, H.E. Stier, W. Stockhausen, M. Studt, J.M. Thénard, K. Thiele, J.C. Thompson, A. De la Torre, H. Wahlen, W. Wallucks, E. Watson, M. Whalley, D.A. Williams, W.S.C. Williams, S. Wimpenny, R. Windmolders, G. Winklmmüller, G. Wolf and P. Zank ..... 212 (1983) 111
- Compensation of errors by cross-calibration of incoming and scattered energies in deep-inelastic lepton scattering, Navarra, F.-L., Č. Zupančič and J. Feltesse ..... 212 (1983) 125
- A fast processor for dilepton triggers, Areti, H., R. Baltrusaitis, E. Barsotti, S. Conetti, B. Cox, J. Enagonio, M. Haldeman, R. Hance, W. Haynes, S. Katsanevas, C. Kerns, P. Kostarakis, P. Lebrun, H. Smith, T. Soszynski, J. Stoffel, K. Treptow, F. Turkot and R. Wagner ..... 212 (1983) 135
- Particle identification in an electron/hadron calorimeter, Bleichert, B.-M., C. Grupen and D. Mattern ..... 212 (1983) 145
- Energy resolution and structure of a calorimeter, Vovenko, A.S., V.G. Platonov, K.E. Shestermanov, A.A. Spiridonov and V.P. Zhigunov ..... 212 (1983) 155
- Study of a method for the resolution of left-right ambiguities in drift chambers, Palladino, V. and D.B. Smith .. 212 (1983) 163
- Generation of photoneutrons by means of a channeled electron beam, Golovkov, V.M., V.N. Zabaev, B.N. Kalinin, A.A. Kurkov, V.I. Lunev, Yu.N. Adishchev, A.P. Potylitsin and S.A. Vorobiev ..... 212 (1983) 167

- First measurement of efficiency and precision of CCD detectors for high energy physics, Bailey, R., C.J.S. Damerell, R.L. English, A.R. Gillman, A.L. Lintern, S.J. Watts and F.J. Wickens . . . . . 213 (1983) 201
- Development of a small high-pressure streamer chamber for charm-lifetime measurements, Eckardt, V. and S. Wenig . . . . . 213 (1983) 217
- Tests of gas sampling electromagnetic shower calorimeter, Barbaro-Galtieri, A., W. Carithers, C. Day, K.J. Johnson, W.A. Wenzel and H. Videau . . . . . 213 (1983) 223
- Effects of space charge, leakage currents and diffusion in large planar electrodeless drift chambers, Becker, Ch., W. Weihs and G. Zech . . . . . 213 (1983) 243
- A modular NaI(Tl) detector for 20–1000 MeV photons, Blüm, P., R. Guigas, H. Koch, M. Meyer, H. Poth, U. Raich, B. Richter, G. Backenstoss, M. Hasinoff, P. Pavlopoulos, J. Repond, L. Tauscher, D. Tröster, L. Adiels, I. Bergström, K. Fransson, A. Kerek, M. Suffert and K. Zioutas . . . . . 213 (1983) 251
- A new scintillator and wavelength shifter, Kamon, T., K. Kondo, A. Yamashita, T. Shimizu and L. Nodulman . . . . . 213 (1983) 261
- The design and calibration of precision drift chambers for use in a gluonium search experiment at the CERN ISR, Albrow, M.G., N.J. Beadle, A.A. Carter, J.R. Carter, P.C. Cecil, S.-U. Chung, D.J.A. Cockerill, W.M. Evans, M.D. Gibson, M.J. Goodrick, J. Hiddleston, N.A. McCubbin, T.W. Pritchard and D.P. Weygand . . . . . 214 (1983) 201
- Particle identification in the relativistic rise region using a longitudinal drift chamber, Arai, R., J. Bensinger, H. Boerner, Y. Fukushima, K. Hayashi, N. Ishihara, S. Inaba, T. Kohriki, S. Nakamura, K. Ogawa, F. Takasaki, Y. Unno and Y. Watase . . . . . 214 (1983) 209
- MARS, a fine grain aluminium–liquid argon calorimeter, Cerri, C., S.P. Denisov, R.N. Krasnokutsky, S.A. Medved, V.S. Mikhailov, N.I. Naumov, S.A. Polovnikov, E.A. Rasuvaev, F. Sergiampietri, R.S. Shuvalov and D.A. Stoyanova . . . . . 214 (1983) 217
- A prototype sampling calorimeter with photodiode readout (SPED), Kononenko, W., W. Selove, G.E. Theodosiou and R. Van Berg . . . . . 214 (1983) 237
- A study of bubble chamber operating conditions for holographic image recording, Benichou, J.L., A. Hervé, K.E. Johansson, P. Lecoq, P. Olivier, J. Pothier, G. Waurick, E. Wiatrowski, R. Roosen, S.P.K. Tavernier, G. Van Beek and O.R. Williams . . . . . 214 (1983) 245
- Charge collection in silicon strip detectors, Belau, E., R. Klanner, G. Lutz, E. Neugebauer, H.J. Seeburner, A. Wylie, T. Böhringer, L. Hubbeling, P. Weilhammer, J. Kemmer, U. Kötz and M. Riesebeil . . . . . 214 (1983) 253
- Electron identification beyond 1 GeV by means of transition radiation, Büngener, A., B. Koppitz, R. Van Staa, P. Stähelin and M. Holder . . . . . 214 (1983) 261
- Photomultiplier gain tuning system, Binon, F., S.V. Donskov, P. Duteil, M. Gouanere, V.A. Kachanov, A.V. Kulik, D. Michotte, Yu.V. Mikhailov, J.P. Peigneux, Yu.D. Prokoshkin, A.V. Singovsky and J.P. Stroot . . . . . 214 (1983) 269
- A trigger system using wire chamber information, Kernel, G., P. Križan, M. Mikuž, A. Stanovnik, D. Zavrtanik, C. Engster, E.G. Michaelis, A.G. Zephat, J. Harvey and K.O.H. Ziock . . . . . 214 (1983) 273
- A liquid scintillator cosmic ray active shield, Freedman, S.J., G.T. Garvey, M. Kroupa, J. Napolitano and J. Worthington . . . . . 215 (1983) 71
- Performance of a prototype solid neon and solid argon calorimeter, Brisson, V., C. Gregory, J. Hanlon, L. Kalt, B. Montes, J. Morinaud, P. Petiau, D.J. Miller, W. Van Doninck and H.A. Rubin . . . . . 215 (1983) 79
- Test results and practical evaluation of a magnetic field tolerant electromagnetic shower detector, based on a lead glass scintillator sandwich, Cozza, C., L. Ventura, G. Zumerle and P. Checchia . . . . . 215 (1983) 89
- Dense lead glass shower counters at high energies, Orito, S., T. Kobayashi and H. Takeda . . . . . 215 (1983) 93
- Characteristics of lead-glass  $\gamma$ -spectrometer radiators irradiated by high energy particles, Inyakin, A.V., D.B. Kakauridze, A.A. Lednev, Yu.D. Prokoshkin and A.V. Singovsky . . . . . 215 (1983) 103
- The response of a  $10'' \times 12''$  NaI(Tl) spectrometer to 130 MeV to 387 MeV  $\gamma$ -rays, Suffert, M., P. Pavlopoulos, K. Zioutas and A. Hegerath . . . . . 215 (1983) 107
- The effect of heat on radiation damage in large NaI crystals, Van Driel, M., K.H. Kess, G.E. Masek, J.C. Sens, J.R. Thompson, J. Weber and J.T. White . . . . . 215 (1983) 113
- Simple scheme for light collection from large-area plastic scintillators, Fields, T. and D. Jankowski . . . . . 215 (1983) 131
- Low pressure drift chamber for studies of the radiation from relativistic particles in single crystals, Filatova, N.A., A. Forycki, V.M. Golovatyuk, Z. Guzik, R.V. Kadyrov, T.S. Nigmanov, V.D. Riabtsov, M.S. Shafranov, E.N. Tsyganov, I.A. Tyapkin, D.V. Uralsky, J. Wojtkowska, M.D. Bavizhev, N.K. Bulgakov and A.N. Iskakov . . . . . 215 (1983) 135
- Calculations of threshold characteristics of Vavilov–Cherenkov radiation emitted by ultrarelativistic particles in a gaseous Cherenkov counter, Zrelov, V.P., M. Klimanova, V.P. Lupiltsev and J. Ružička . . . . . 215 (1983) 141
- The limited streamer tube system of the CHARM collaboration, Jonker, M., F. Udo, U. Amaldi, R. Donnet, W. Flegel, B. Friend, E. Gygi, M. Jimenez, A. King, F. Schneider, A.M. Wetherell, J. Aspiazu, F. Niebergall, J. Schütt, F. Ferroni, D. De Pedis and V. Valente . . . . . 215 (1983) 361
- Calibration and performance of a drift chamber spectrometer, Chandlee, C., D. Berg, S. Cihangir, B. Collick, T. Ferbel, S. Heppelmann, J. Huston, T. Jensen, A. Jonckheere, T. Joyce, P. Koehler, F. Lobkowicz, Y. Makdisi, M. Marshak, M. McLaughlin, C. Nelson, T. Ohshima, E. Peterson, K. Ruddick, P. Slattery and P. Thompson . . . . . 215 (1983) 369



Implementation and performance of the optical fiducial volume trigger used with the rapid cycling bubble chamber, Anders, H., P. Bähler, D.A. Jacobs, K.E. Johansson, B.J. Pijlgroms and R. Zurbuchen . . . . .	215 (1983) 377
Transport of high energy muons in a soil shield, Nelson, W.R., T.M. Jenkins, G.R. Stevenson, M. Nielsen, E.H.M. Heijne, P. Jarron, J. Lord and S. Anderson . . . . .	215 (1983) 385
The ARGUS electron/photon calorimeter. II. Properties of the light collection system of the lead/scintillator shower counters, Drescher, A., H.J. Graf, B. Gräwe, W. Hofmann, A. Markees, U. Matthiesen, J. Spengler and D. Wegener . . . . .	216 (1983) 35
Response of a highly segmented extruded lead glass calorimeter to electrons and pions between 15 and 45 GeV/c, Engelmann, R., L. Godfrey, P.D. Grannis, D. Hedin, D.E. Jaffe, T. Kafka, M.D. Marx, R. Dixon, H. Jostlein, P. Franzini, D. Cutts, R.E. Lanou and S. Aronson . . . . .	216 (1983) 45
A test of 150 cm × 20 cm wide time-of-flight scintillation counters, Tanimori, T., T. Kageyama, K. Nakamura, M. Yoshioka, J. Haba, H. Kawai, M. Kobayashi, T.S. Nakamura and N. Sasao . . . . .	216 (1983) 57
Some simple approaches used in the construction of multiwire proportional chambers, Starič, M., D. Zavrtanik and G. Kernel . . . . .	216 (1983) 67
Intelligent towers for electromagnetic showers, Blocker, C., G.W. Brandenburg, R. Carey, T. Edberg, M. Levi, J. Oliver, N. Patz, E. Sadowski, T. Schaad and R.F. Schwitters . . . . .	216 (1983) 71
Progress in Cherenkov ring imaging. Part 2: Identification of charged hadrons at 200 GeV/c, Mangeot, Ph., G. Coutrakon, J.R. Hubbard, J. Mullié, J. Tichit, A. Zadra, R. Bouclier, G. Charpak, J. Million, A. Peisert, J.C. Santiard, F. Sauli, C.N. Brown, D. Finley, H. Glass, J. Kirz and R.L. McCarthy . . . . .	216 (1983) 79
Radiative moderation of an electron beam by a silicon crystal, Frolov, A.M., K.I. Gubrienko, V.A. Maisheev, A.I. Mysnik, S.B. Nurushev and V.L. Solovianov . . . . .	216 (1983) 93
The yield of resonance neutrons from a thick copper target bombarded by electrons with energies up to 100 GeV, Stevenson, G.R., A. Fassò, M. Hoefert, M.C. Nielsen and R.C. Raffusoe . . . . .	216 (1983) 99
A giant argon bubble chamber with long sensitive time for nucleon decay experiments, Harigel, G., A. Herve and K. Winter . . . . .	216 (1983) 355
A precision luminosity monitor for electron–positron storage rings, O'Neill, L.H., R.L. Ford, E.B. Hughes, E. Hilger, J.W. Simpson and L.K. Resvanis . . . . .	216 (1983) 361
Operational performance of a large liquid argon photon calorimeter, Nelson, C., J. Biel, T. Droege, A. Jonckheere, P. Koehler, D. Berg, C. Chandlee, S. Cihangir, T. Ferbel, J. Hutson, T. Jensen, J. LeBritton, F. Lobkowicz, M. McLaughlin, T. Ohshima, P. Slattery, P. Thompson, C. Bromberg, S.R.W. Cooper, B. Collick, S. Heppelmann, Y. Makdisi, M. Marshak, E. Peterson, J. Povlis, K. Ruddick, B. Brown, D. Garelick, G. Glass, M. Glaubman, S.R. Han and E. Pothier . . . . .	216 (1983) 381
A system of large multiwire proportional chambers for a high intensity experiment, De Palma, M., C. Favuzzi, G. Maggi, A. Ranieri, G. Selvaggi, P. Spinelli, H.J. Gebauer, J. Fent, P. Freund, J. Seyboth and J. Seyerlein . . . . .	216 (1983) 393
Low noise ionization chambers for use in transmission measurements with medium and high energy beams, Bowman, J.D., R. Carlini, R. Damjanovich, R.E. Mischke, D.E. Nagle, R.L. Talaga, R.W. Harper and V. Yuan . . . . .	216 (1983) 399
Optical trigger processor for high energy physics, Cleland, W.E., D.E. Kraus, J.A. Thompson and P. Ambs . . . . .	216 (1983) 405

*Proceedings of the Wire Chamber Conference 1983*  
*Vienna, Austria, February 15–18, 1983*

**Part I. Plenary talks**

Software for large spectrometers, Bock, R.K. . . . .	217 (1983) 1
Gaseous detectors for particle physics: a still blooming source of new instruments, Charpak, G. . . . .	217 (1983) 5
Electromagnetic calorimeters using wire chambers, Engler, J. . . . .	217 (1983) 9
Applications of multiwire proportional chambers in biophysics and medicine, Faruqi, A.R. . . . .	217 (1983) 19
Plastic streamer tubes and their applications in high energy physics, Iarocci, E. . . . .	217 (1983) 30
Progress in particle identification by ionization sampling, Lehrs, I. . . . .	217 (1983) 43
Coordinate gas counters with superhigh energy resolution for plasma diagnostics, Karabadzha, G.F., V.D. Peskov and E.R. Podolyak . . . . .	217 (1983) 56
State-of-the-art and application of wire chambers, Walenta, A.H. . . . .	217 (1983) 65

**Part II. Applications in medicine, biology, low energy and X-ray physics**

The development of MWPC-based systems for imaging X-rays, gamma rays and charged particles in applications in medicine, materials science and biochemistry, Bateman, J.E., J.F. Connolly, R. Stephenson, G.J.R. Tappern and A.C. Flesher . . . . .	217 (1983) 77
Further improvements in the design of a positron camera with dense drift space MWPCs, Perez-Mendez, V., G. Schwartz, W.R. Nelson, R. Bellazzini, A. Del Guerra, M.M. Massai and G. Spandre . . . . .	217 (1983) 89



Biomedical applications of MWPCs for digital imaging of soft $\beta$ -emitters, Bellazzini, R., A. Del Guerra, M.M. Massai and G. Spandre	217 (1983) 93
An imaging escape gated MWPC for hard X-ray astronomy, Ubertini, P., A. Bazzano, L. Boccaccini, C. La Padula, M. Mastropietro, R. Patriarca, V.F. Polcaro, L. Barbareschi, F. Perotti, G. Villa, R.C. Butler, G. Di Cocco, G. Spada, P. Charalambous, A.J. Dean and J.B. Stephen	217 (1983) 97
Automatic coordinate detectors based on MWPC for applied studies, Abdushukurov, D.A., Yu.S. Anisimov, G.A. Cheremukhina, S.P. Chernenko, A.B. Ivanov, L. Mouchka, S.A. Movchan, T. Netushil, V.D. Peshekhonov and Yu.V. Zanevsky	217 (1983) 101
Heavy particle timing and imaging with low-pressure MWPCs, Breskin, A., R. Chechik, I. Levin and N. Zwang	217 (1983) 107
New MWPCs for the Munich Q3D spectrograph, Chalupka, A., W. Bartl, L. Schönauer, K.U. Bahnsen, J. Labedzki, H.J. Scheerer, H. Vonach and G. Ziegler	217 (1983) 113
A multiwire proportional chamber for the measurement of differential (n, charged particle) cross-sections, Traxler, G., R. Fischer and H. Vonach	217 (1983) 121
Test and performance of position sensitive parallel plate avalanche detectors in heavy-ion kinematic coincidence measurements, Schandera, Ch., Ch. Lauterbach and J. De Boer	217 (1983) 128
The TREC: a $4\pi$ , low-pressure tracking range and energy chamber for heavily ionizing particles, Breskin, A., T. Johansson, S. Polikanov and J.C. Santiard	217 (1983) 131

### Part III. Planar chambers

A system of large multiwire proportional chambers for a high intensity experiment, De Palma, M., C. Favuzzi, G. Maggi, A. Ranieri, G. Selvaggi, P. Spinelli, H.J. Gebauer, J. Fent, P. Freund, J. Seyboth and J. Seyerlein	217 (1983) 135
The MPS II drift chamber system, Eiseman, S., A. Etkin, K.J. Foley, R.S. Longacre, W.A. Love, T.W. Morris, S. Ozaki, E.D. Platner, V.A. Polychronakos, A.C. Saulys, C.D. Wheeler, S.J. Lindenbaum, M.A. Kramer and Y. Teramoto	217 (1983) 140
The multiwire proportional chamber for extensive air shower experiments, Bogorodzki, A., W. Olejniczak and A. Rychtelski	217 (1983) 149

### Part IV. Cylindrical chambers, vertex detectors

The ARGUS drift chamber, Danilov, M., H. Hasemann, P. Kim, E. Michel, V. Nagovizin, W. Schmidt-Parzefall and R. Wurth	217 (1983) 153
A large polygon drift chamber for the JADE experiment at PETRA, Dietrich, G., P. Steffen, W. Wietbrock, D. Clarke, C.R. Hedgecock and R. Marshall	217 (1983) 160
Design and study of a large cylindrical drift chamber, Bénichou, J.L., W. Flegel, B. Friend, O. Gildemeister, C. Girard, C. Hauviller, A. Hervé, A. King, P. Lecoq, J. Panman and K. Winter	217 (1983) 163
Large radius self-supporting cylindrical multiwire proportional chambers to be used at the ASTERIX experiment at LEAR, Ahmad, S., J.C. Bizot, B. Delcourt, J. Jeanjean, M. Jeanjean, H. Nguyen-Ngoc and W.R. Wodrich	217 (1983) 169
A stereo, cylindrical drift chamber for muon decay experiments at LAMPF, Bolton, R.D., R.D. Carlini, M.D. Cooper, J.S. Frank, V. Hart, H.S. Matis, R.E. Mischke, V.D. Sandberg and U. Sennhauser	217 (1983) 173
Development of a large cylindrical drift chamber for the VENUS detector at TRISTAN, Arai, R., H. Boerner, N. Ishihara, T. Kohriki, T. Kondo, S. Nakamura, Y. Watase and F. Suekane	217 (1983) 181
The PAD TPC: a TPC without sense wires, Hilke, H.J.	217 (1983) 189
The use of a pair of time projection chambers as a wide-angle vertex detector for the $\Omega'$ spectrometer at CERN, Benso, S., G. Darbo, L. Rossi, M. Sannino, L. Traspedini and S. Vitale	217 (1983) 194

### Part V. Drift tubes

Presampling with streamer tubes, Bourquin, M. and T. Modis	217 (1983) 201
The performance of limited streamer drift tubes, Baubillier, M., M. Boratav, J.-F. Genat, B. Grossetete, C. Pambrun and P. Villeneuve de Janti	217 (1983) 205
Geiger tube planes as a trigger for the nucleon lifetime experiment in the Frejus tunnel (France), Dudelzak, B., P. Eschstruth, B. Grelaud, S. Jullian, D. Lalanne, F. Laplanche, C. Longuemare, C. Paulot, Ph. Roy and G. Szklarz	217 (1983) 208

### Part VI. Special devices

Electrodeless drift chambers, Zech, G.	217 (1983) 209
The blade chamber: a solution for curved gaseous detectors, Ballon, J., V. Comparat and J. Pouxé	217 (1983) 213

- Coupling of a BaF<sub>2</sub> scintillator to a TMAE photocathode and a low-pressure wire chamber, Anderson, D.F., R. Bouclier, G. Charpak and S. Majewski . . . . . 217 (1983) 217
- Silicon detectors with 5  $\mu$ m spatial resolution for high energy particles, Belau, E., J. Kemmer, R. Klanner, U. Kötzt, G. Lutz, W. Männer, E. Neugebauer, H.J. Seebrunner and A. Wylie . . . . . 217 (1983) 224
- The parallel plate avalanche chamber as an endcap detector for time projection chambers, Peisert, A. . . . . 217 (1983) 229

## Part VII. Particle identification

- $\pi$ /K/p identification with a large-aperture ring-imaging Cherenkov counter, Adams, M., A. Bastin, G. Coutrakon, H. Glass, D. Jaffe, J. Kirz, R. McCarthy, J.R. Hubbard, Ph. Mangeot, J. Mullie, A. Peisert, J. Tichit, R. Bouclier, G. Charpak, J.C. Santiard, F. Sauli, J. Crittenden, Y. Hsiung, D. Kaplan, C. Brown, S. Childress, D. Finley, A. Ito, A. Jonckheere, H. Jöstlein, L. Lederman, R. Orava, S. Smith, K. Sugano, K. Ueno, A. Maki, Y. Hemmi, K. Miyake, T. Nakamura, N. Sasao, Y. Sakai, R. Gray, R. Plaag, J. Rothberg, J. Rutherford and K. Young . . . . . 217 (1983) 237
- A multistep avalanche chamber with charge-division read-out as a single-photon detector for ring imaging Cherenkov counters, Dulinski, W. and T. Ekelöf . . . . . 217 (1983) 244
- Performance of the CLEO dE/dx system, Kubota, Y., F. Morrow, S. Stone and R. Wilcke . . . . . 217 (1983) 249
- Electron identification beyond 1 GeV by means of transition radiation, Büngener, A., B. Koppitz, R. Van Staa, P. Stähelin and M. Holder . . . . . 217 (1983) 254

## Part VIII. Calorimeters

- Design of a lead glass drift calorimeter with MWPC detection, Perez-Mendez, V., A. Del Guerra, T. Mulera, H. Hiramaya and W.R. Nelson . . . . . 217 (1983) 255
- Performance of the hexagonal calorimeter at PEP-4, Aihara, H., M. Alston-Garnjost, D.H. Badtke, J.A. Bakken, A. Barbaro-Galtieri, A.V. Barnes, B.A. Barnett, B. Blumenfeld, A. Bross, C.D. Buchanan, W.C. Carithers, O. Chamberlain, J. Chiba, C.-Y. Chien, A.R. Clark, O.I. Dahl, C.T. Day, P. Delpierre, K.A. Derby, P.H. Eberhard, D.L. Fancher, H. Fujii, T. Fujii, B. Gabioud, J.W. Gary, W. Gorn, N.J. Hadley, J.M. Hauptman, B. Heck, H.J. Hilke, W. Hofmann, J.E. Huth, J. Hysten, H. Iwasaki, T. Kamae, R.W. Kenney, L.T. Kerth, R. Koda, R.R. Kofler, K.K. Kwong, J.G. Layter, C.S. Lindsey, S.C. Loken, G.W. London, X.-Q. Lu, G.R. Lynch, L. Madansky, R.J. Madaras, R. Majka, J. Mallet, P.S. Martin, K. Maruyama, J.N. Marx, J.A.J. Matthews, S.O. Melnikoff, W. Moses, P. Nemethy, D.R. Nygren, P.J. Oddone, D. Park, A. Pevsner, M. Pripstein, P.R. Robrish, M.T. Ronan, R.R. Ross, F.R. Rouse, G. Shapiro, M.D. Shapiro, B.C. Shen, W.E. Slater, M.L. Stevenson, D.H. Stork, H.K. Ticho, N. Toge, M. Urban, G.J. Van Dalen, R. Van Tyen, H. Videau, M. Wayne, W.A. Wenzel, R.F. Van Daalen Wetters, M. Yamauchi, M.E. Zeller and W.-M. Zhang . . . . . 217 (1983) 259
- A thin multiwire chamber operating in the high multiplication mode, Majewski, S., G. Charpak, A. Breskin and G. Mikenberg . . . . . 217 (1983) 265

## Part IX. Gas, laser

- Dimethylether: a low velocity, low diffusion drift chamber gas, Villa, F. . . . . 217 (1983) 273
- Precision measurements of energy loss distributions in xenon using proportional scintillation in a wire chamber, Herold, W.-D., J. Egger, H. Kaspar and F. Pocar . . . . . 217 (1983) 277
- Average ionization energies of gas mixtures for X-rays, Järvinen, M.-L. and H. Sipilä . . . . . 217 (1983) 282
- Comparison between argon/methane and argon/ethane gas mixtures in cylindrical drift chambers operating in a high transverse magnetic field, Binder, U., W. De Boer, G. Grindhammer, R. Kotthaus, H. Lierl and B. Sack . . . . . 217 (1983) 285
- A study of ageing effects in wire chambers, Adam, J., C. Baird, D. Cockerill, P.K. Frandsen, H.J. Hilke, H. Hofmann, T. Ludlam, E. Rosso, D. Soria and D. Vaughan . . . . . 217 (1983) 291
- Extended lifetime of a wire chamber, Sipilä, H. and M.-L. Järvinen . . . . . 217 (1983) 298
- Inorganic gas mixtures for proportional counters, Dwurażny, A., K. Jeleń and E. Rulikowska Zarębska . . . . . 217 (1983) 301
- Laser induced ionisation in proportional counters, Raine, C., K.W.D. Ledingham and K.M. Smith . . . . . 217 (1983) 305
- Laser track alignment calibration of drift chamber systems over four meters, Konijn, J. and F. Hartjes . . . . . 217 (1983) 311

## Part X. Wire chamber parameters

- $E \times B$  and angular effects in the avalanche localization along the wire with cathode pad read-out, Amendolia, S.R., G. Batignani, M. Dris, F. Fidecaro, F. Liello, J. May, T. Meyer, E. Milotti, F. Ragusa, J. Richstein and L. Rolandi . . . . . 217 (1983) 317
- Measurement and simulation of the drift pulses and resolution in the micro-jet chamber, Va'vra, J. . . . . 217 (1983) 322

- Cathode charge sampling readout system for MWPC, Antille, J., A. Bernasconi, J.-C. Berney, C. Joseph, J.-F. Loude, D. Steiner and M.T. Tran ..... 217 (1983) 327
- A calculation in three dimensions of the induced charge on the electrodes of an MWPC, Van der Graaf, H. and J.P. Wagenaar ..... 217 (1983) 330

## Part XI. Electronics

- Drift chamber electronics with multi-hit capability for time and current division measurements, Manarin, A., L. Pregernig, M. Rabany, R. Saban and G. Vismara ..... 217 (1983) 335
- Readout for multineedle detectors, Comby, G., J. Quidort and J.L. Augueres ..... 217 (1983) 345
- A high speed driftchamber readout system: "TIRUS", Distelbrink, J.H.J. and B.H. Cottman ..... 217 (1983) 351
- A novel, two dimensional, fast, low cost and accurate readout system for MWPCs, Van der Graaf, H. and J.P. Wagenaar ..... 217 (1983) 357
- On-line event selection with the FAMP microprocessor system, Daum, C., H. Dijkstra, D. Gosman, C. Hardwick, L. Hertzberger, W. Hoogland, G. de Rijk, H. Tiecke and L. Wiggers ..... 217 (1983) 361
- Fast-bus trigger processor for  $e^+e^-e^+$  events in the SINDRUM detector, Bertl, W.H., L. Felawka and R.J. Powers ..... 217 (1983) 367

## Part XII. Software

- Pattern recognition program for the pictorial drift chamber Diogene, Poitou, J. .... 217 (1983) 373
- Pattern recognition for hadronic showers in the CHARM calorimeter, Abt, I., H. Daumann, P. Stähelin, P. Gorbunov, L. Luminari, M. Metcalf, R.S. Orr and J. Panman ..... 217 (1983) 377

- A segmented photon-hadron calorimeter using a two coloured wavelength shifter optical readout system, De Marzo, C., M. De Palma, A. Distanto, C. Favuzzi, R. Ferrorelli, P. Lavopa, G. Maggi, M. Perchiazzi, F. Posa, A. Ranieri, G. Selvaggi, P. Spinelli, F. Waldner, J. Fent, P. Freund, H. Fessler, R. Kalbach, A. Manz, P. Polakos, K.P. Pretzl, T. Schouten, P. Seyboth, J. Seyerlein and D. Vranic ..... 217 (1983) 405
- Calculation of muonic fields around large high energy proton accelerators, Maslov, M.A., N.V. Mokhov and A.V. Uzunian ..... 217 (1983) 419
- Laser deuterium streamer chamber at 5 atm in self-shunt regime, Exnerova, Ya., I.V. Falomkin, I.Ts. Ivanov, V. Khristov, V.I. Lyashenko, V.A. Panyushkin, G.B. Pontecorvo, Yu.A. Shcherbakov, A. Trifonov, T. Troshev and Ya. Yani ..... 217 (1983) 425
- Electrodeless plastic streamer tubes, Battistoni, G., P. Campana, V. Chiarella, A. Ciochio, U. Denni, E. Iarocci, G. Mannocchi, M. Meschini, G. Nicoletti and P. Picchi ..... 217 (1983) 429
- Influence of gas mixture and cathode material on limited streamer operation, Battistoni, G., P. Campana, V. Chiarella, U. Denni, B. D'Ettorre-Piazzoli, E. Iarocci, G. Mannocchi, G. Nicoletti and P. Picchi ..... 217 (1983) 433
- Elementary particle physics – where is it going?, Schopper, H. .... 219 (1984) 54
- The hardware design of the optical fiducial volume trigger for the rapid cycling bubble chamber of EHS, Anders, H., J. Antonsen, R.E.S. Berglund, G. Chanel, C. Ljuslin, J. Oropesa, L. Sohet and R. Zurbuchen ... 219 (1984) 66
- Calculations for transition radiation detectors, Astabatyán, R.A. and K.Zh. Margaryan ..... 219 (1984) 78
- Measurement, parametrization and fast simulation of hadronic showers in lead, De Palma, M., C. Favuzzi, G. Maggi, E. Nappi, A. Ranieri and P. Spinelli ..... 219 (1984) 87
- A large angular acceptance plastic Cherenkov detector for intermediate energy physics, Sondheim, W.E., R.M. Devries, M.R. Clover, N.J. Digiacomo, J.S. Kapustinsky and J.W. Sunier ..... 219 (1984) 97
- A sensitive instrument for measuring wire tension in multiwire proportional and drift chambers, Regan, T. .... 219 (1984) 100
- An experimental study of the neutrino background in underground experiments on nucleon decay, Battistoni, G., E. Bellotti, G. Bologna, P. Campana, C. Castagnoli, V. Chiarella, D.C. Cundy, B. D'Ettorre Piazzoli, E. Fiorini, E. Iarocci, G. Mannocchi, G.P. Murtas, P. Negri, G. Nicoletti, L. Periale, P. Picchi, M. Price, A. Pullia, S. Ragazzi, M. Rollier, O. Saavedra, L. Trasatti and L. Zanotti ..... 219 (1984) 300
- A hexagonal uranium calorimeter for measuring electromagnetic showers at the CERN ISR, Carosi, R., A. Di Ciaccio, C.W. Fabjan, H. Gordon, M. Harris, G. Kessler, J. v.d. Lans, I. Mannelli, L. Olsen, G. Pierazzini, W.J. Willis, W. Witzeling and C. Woody ..... 219 (1984) 311
- A new crystal bending device for focusing crystal spectrometers, Beer, W., P.F.A. Goudsmit and L. Knecht ... 219 (1984) 322
- The efficiency of counter telescopes for intermediate energy protons, Bracco, A., H.P. Gubler, D.K. Hasell, W.T.H. Van Oers, R. Abegg, C.A. Miller, M.B. Epstein, D.A. Krause, D.J. Margaziotis and A.W. Stetz .... 219 (1984) 329
- A new approach to the radiation hardness of BGO, Wen, S.L. and C.F. He ..... 219 (1984) 333
- The spatial resolution of the time projection chamber at TRIUMF, Hargrove, C.K., H. Mes, A. Bennett, D.A. Bryman, M. Hasinoff, J.A. MacDonald, J.M. Poutissou, T. Numao, J. Spuller, G. Azuelos, R. Poutissou, M. Blecher, K. Gotow and A.L. Carter ..... 219 (1984) 461



Feasibility test of a shrink-fit assembly of a large-diameter superconducting solenoid for a colliding beam detector, Minemura, H., S. Mori, M. Noguchi, R. Yoshizaki, K. Kondo, R. Fast, R. Kephart, R. Wands, R. Yamada, K. Asano, I. Kamishita, I. Kurita, R. Saito, T. Suzuki and T. Yamagiwa	219 (1984) 472
The barrel shower counter for the Mark III detector at SPEAR, Toki, W., K. Bunnell, R. Cassell, K. Skarpaas, J. Becker, J. Brown, K. Einsweiler, J. Russell, A. Spadafora, H.-J. Willutzki and W. Wisniewski	219 (1984) 479
A measurement of the response of an SCG1-C scintillation glass shower detector to 2–17.5 GeV positrons, Cox, B., G. Hale, P.O. Mazur, R.L. Wagner, D.E. Wagoner, H. Areti, S. Conetti, P. Lebrun, T. Ryan, J.E. Brau and R.A. Gearhart	219 (1984) 487
High energy electromagnetic shower position measurement by a fine grained scintillation hodoscope, Cox, B., G. Hale, P.O. Mazur, R.L. Wagner, D.E. Wagoner, H. Areti, S. Conetti, P. Lebrun, T. Ryan and R.A. Gearhart	219 (1984) 491
Time-of-flight resolution for a long scintillator counter, D'Agostini, G., J.P. Albanese, J.J. Aubert, C. Benchouk, E. Kajfasz, R. Nacasch and P. Payre	219 (1984) 495
Design and operation of the $\Lambda$ beam at KEK, Abe, F., K. Hara, K. Kondo, S. Miyashita, H. Miyata, I. Nakano, K. Takikawa, R. Tanaka, Y. Yamamoto, T. Yasuda, K. Yasuoka, Y. Fukui, S. Kurokawa and A. Maki	220 (1984) 293
Test of high resolution two-beam holography in a model of the Big European Bubble Chamber, BEBC, Bjelkhagen, H., F. Pouyat, P. Kasper, E.E. Miranda, R.L. Sekulin, W. Venus and L. Walton	220 (1984) 300
Track and vertex fitting in an inhomogeneous magnetic field, Hart, J.C. and D.H. Saxon	220 (1984) 309
Monte Carlo studies for the design of a lead glass drift calorimeter, Hirayama, H., W.R. Nelson, A. Del Guerra, T. Mulera and V. Perez-Mendez	220 (1984) 327
Resolution study for large drift chamber systems, Becker, U., P. Berges, E. Scheidker, P. Seiler, C.H. Ye and C. Willmott	220 (1984) 338
High resolution scintillation hodoscope using a position sensitive photomultiplier, Ditta, J., D. Sillou, A. Michalowicz, H. Azaiez and K. Kuroda	220 (1984) 343
On the low-pressure operation of multistep avalanche chambers, Breskin, A., G. Charpak and S. Majewski	220 (1984) 349
Ionisation energy losses of highly relativistic charged particles in thin silicon layers, Hall, G.	220 (1984) 356

## Instruments and Methods for Nuclear Spectroscopy

The experimental tools to exploit the Daresbury nuclear structure facility, Gelletly, W.	211 (1983) 89
A magnetic transport electron spectrometer for in-beam measurements, Fazzini, T., A. Giannatiempo and A. Perego	211 (1983) 125
A counter for the identification and the energy determination of light charged particles and neutrons of 20–100 MeV, Cernigoi, C., N. Grion, G. Pauli, R. Rui and R. Cherubini	211 (1983) 129
Computed response functions of large NaI spectrometers at photon energies above 20 MeV, Taiuti, M., M. Anghinolfi, P. Corvisiero, G. Ricco and A. Zucchiatti	211 (1983) 135
Triple gamma ray directional correlation in $^{154}\text{Gd}$ , Lewis, G.C., G. Mohammad, L.D. Wyly, E.T. Patronis and C.H. Braden	211 (1983) 371
In-beam gamma-ray studies with tritons, Becker, J.A., J.B. Carlson, R.G. Lanier, K.H. Maier, L.G. Mann, G.L. Struble, T.W. Nail, R.K. Sheline, W. Stöfl, L.E. Ussery, J.A. Cizewski and B. Erkill	211 (1983) 379
A novel momentum-selective magnetic steering device for low energy electrons, Hofmann, D.	211 (1983) 387
A Monte Carlo study of the response of a germanium detector to electrons and positrons, Noma, H., F.T. Avignone, III, D.M. Moltz and K.S. Toth	211 (1983) 391
A two-dimensional position-sensitive MWPC for fission fragments, Van der Plicht, J. and A. Gavron	211 (1983) 403
Facility for the measurements of proton polarization in the range 50–70 MeV, Nakamura, M., H. Sakaguchi, H. Sakamoto, H. Ogawa, O. Cynshi, S. Kobayashi, S. Kato, N. Matsuoka, K. Hatanaka and T. Noro	212 (1983) 173
Performance of a recoil mass spectrometer, Cormier, T.M., M.G. Herman, B.S. Lin and P.M. Stwertka	212 (1983) 185
A versatile large area parallel plate avalanche counter (PPAC) for broad-range magnetic spectrographs, Sernicki, J.	212 (1983) 195
Position sensitive multiwire proportional parallel plate detector for heavy ions, Mazur, C. and M. Ribrag	212 (1983) 203
Detection of charged particles with a phoswich counter, Pastor, C., F. Benrachi, B. Chambon, D. Drain, A. Dauchy, A. Giorni and C. Morand	212 (1983) 209
A new method for identification of low energy fragments with $8 < Z \leq 18$ in plastic track detector Makrofol, Todorović, Ž. and R. Antanasijević	212 (1983) 217
Semiconductor telescope spectrometer for beta-ray spectra, Trzaska, W., J. Äystö and J. Kantele	212 (1983) 221
Particle identification through the measurement of the Bragg curve centroid, Kimura, K.	212 (1983) 227
A gas cell for Doppler-shift attenuation measurements up to $10^7$ Pa, Bini, M., G. Poggi and N. Taccetti	212 (1983) 235
A compact Compton suppression spectrometer using bismuth germanate scintillator, Mohsen, M.	212 (1983) 241
A new system for astrophysical nuclear reaction studies with radioactive ion beams, Haight, R.C., G.J. Mathews, R.M. White, L.A. Avilés and S.E. Woodard	212 (1983) 245
Precision measurements of gamma-ray intensities. IV. Low energy region: $^{75}\text{Se}$ and $^{133}\text{Ba}$ , Yoshizawa, Y., Y. Iwata, T. Katoh, J.-Z. Ruan and Y. Kawada	212 (1983) 249

Precision measurements of gamma-ray intensities. V. $^{160}\text{Tb}$ , $^{168}\text{Tm}$ and $^{182}\text{Ta}$ , Jin, J., J. Takada, Y. Iwata and Y. Yoshizawa .....	212 (1983) 259
<i>Proceedings of the Fifth International Workshop on Mercuric Iodide Nuclear Radiation Detectors Jerusalem, Israel, June 6 &amp; 8, 1982</i>	
<b>Part I. Introduction</b>	
Introduction to Fifth International Workshop on Mercuric Iodide Nuclear Radiation Detectors, Schieber, M. . .	213 (1983) 1
Review of mercuric iodide development program in Santa Barbara, Lamonds, H.A. ....	213 (1983) 5
<b>Part II. Crystal growth and detector fabrication</b>	
Technology of high-purity $\text{HgI}_2$ , Nicolau, Y.F. ....	213 (1983) 13
Mass transport, nucleation and monocrystal growth of $\text{HgI}_2$ with the forced flux method, Omaly, J., M. Robert, P. Brisson and R. Cadoret .....	213 (1983) 19
Nuclear response and phase transformation of melt grown, $\text{SbI}_3$ -doped $\text{HgI}_2$ , Nissenbaum, J., I. Shilo, A. Burger, A. Levi, M. Schieber, L. Keller and C.N.J. Wagner .....	213 (1983) 27
Fabrication of $\text{HgI}_2$ nuclear radiation detectors by machine cleaving, Levi, A., A. Burger, M. Schieber, L. Van den Berg, W.B. Yelon and R.W. Alkire .....	213 (1983) 31
Search for improved surface treatment procedures in fabrication of $\text{HgI}_2$ X-ray spectrometers, Levi, A., A. Burger, J. Nissenbaum, M. Schieber and Z. Burshtein .....	213 (1983) 35
<b>Part III. Characterization</b>	
Spark source mass spectrographic analyses of $\alpha\text{-HgI}_2$ : A comparison of samples from different laboratories, Muheim, J.T., T. Kobayashi and E. Kaldis .....	213 (1983) 39
Characterization of extended defects in $\alpha\text{-HgI}_2$ single crystals, Gits, S. ....	213 (1983) 43
Low temperature photoluminescence of detector-grade $\text{HgI}_2$ , Merz, J.L., Z.L. Wu, L. Van den Berg and W.F. Schnepple .....	213 (1983) 51
Influence of temperature upon dislocation mobility and elastic limit of single crystal $\text{HgI}_2$ , Milstein, F., B. Farber, K. Kim, L. Van den Berg and W.F. Schnepple .....	213 (1983) 65
Search for correlations between electrical characteristics and stoichiometry in mercuric iodide, Tadjine, A., D. Gosselin, J.M. Koebel and P. Siffert .....	213 (1983) 77
Rise time of mercuric iodide detectors, Holzer, A. ....	213 (1983) 83
<b>Part IV. Applications</b>	
Progress in energy resolution of mercuric iodide ( $\text{HgI}_2$ ) X-ray spectrometers, Dabrowski, A.J., W.M. Szymczyk, J.S. Iwanczyk, J.H. Kusmiss, W.E. Drummond and L. Ames .....	213 (1983) 89
Mercuric iodide imaging detectors, Ortale, C., L. Padgett and W.F. Schnepple .....	213 (1983) 95
Larger volumes of $\text{HgI}_2$ used as portable gamma-ray counters, Warren, J.L. ....	213 (1983) 103
Gamma-ray spectrometry with thick mercuric iodide detectors, Beyerle, A., K. Hull, J. Markakis, B. Lopez and W.M. Szymczyk .....	213 (1983) 107
Gamma-ray spectrometry with solid-state detectors by current pulse height analysis, Szymczyk, W.M., A.J. Dabrowski, J.S. Iwanczyk, J.H. Kusmiss, G.C. Huth, K. Hull, A. Beyerle and J. Markakis .....	213 (1983) 115
Scintillation spectrometer with $\text{HgI}_2$ as the photodetector, Iwanczyk, J.S., J.B. Barton, A.J. Dabrowski, J.H. Kusmiss, W.M. Szymczyk, G.C. Huth, J. Markakis, W.F. Schnepple and R. Lynn .....	213 (1983) 123
Mercuric diiodide ( $\text{HgI}_2$ ) semiconductor devices as charged particle detectors, Becchetti, F.D., R.S. Raymond, R.A. Ristinen, W.F. Schnepple and C. Ortale .....	213 (1983) 127
A mercuric iodide detector system for X-ray astronomy I. Design considerations and predictions of background and sensitivity, Ricker, G.R., J.V. Vallergera and D.R. Wood .....	213 (1983) 133
A mercuric iodide detector system for X-ray astronomy II. Results from flight tests of a balloon borne instrument, Vallergera, J.V., R.K. Vanderspek and G.R. Ricker .....	213 (1983) 145
<hr/>	
Determination of the multipolarity of prompt electromagnetic transitions from angular distributions of conversion electrons. Part I: Method, Faust, H.R. ....	213 (1983) 271
Determination of the multipolarity of prompt electromagnetic transitions from angular distributions of conversion electrons. Part II: Spectrometer and measurements, Faust, H.R., H. Klewe-Nebenius, H. Rebel and K. Wisshak .....	213 (1983) 277

- A threshold Cherenkov counter for isotopic identification of high-energy heavy ions, Stevenson, J.D. and J.A. Musser ..... 213 (1983) 285
- Absolute beam intensity measurements with a 200 watt calorimeter, Vlieks, A.E., M. Hilgemeier and C. Rolfs .. 213 (1983) 291
- The prompt response of bismuth germanate and NaI(Tl) scintillation detectors to fast neutrons, Häusser, O., M.A. Lone, T.K. Alexander, S.A. Kushneriuk and J. Gascon ..... 213 (1983) 301
- Time focussing and resolution in resonance detector neutron spectrometers, Carpenter, J.M. and N. Watanabe .. 213 (1983) 311
- The QQDDQ magnet spectrometer "BIG KARL", Martin, S.A., A. Hardt, J. Meissburger, G.P.A. Berg, U. Hacker, W. Hürlimann, J.G.M. Römer, T. Sagefka, A. Retz, O.W.B. Schult, K.L. Brown and K. Halbach ... 214 (1983) 281
- A simple method for direct compensation for kinematic energy spread using a silicon PSD, England, J.B.A., S.D. Hoath, T.R. Ophel and B.R. Fulton ..... 214 (1983) 305
- A multi-purpose NaI(Tl) detector system, Elfström, S., L. Hildingsson, D. Jerrestam and Th. Lindblad ..... 214 (1983) 311
- On the use of isomer ratios in  $^{44}\text{Sc}$  for predicting spin populations in high energy heavy-ion nuclear reactions, Groening, H., K.J. Moody and G.T. Seaborg ..... 214 (1983) 317
- Some remarks concerning triple angular correlations, Krane, K.S. .... 214 (1983) 321
- Total neutron yields from 100 MeV protons on Pb and  $^7\text{Li}$  targets, Lone, M.A., R.T. Jones, A. Okazaki, B.M. Townes, D.C. Santry, E.D. Earle, J.K.P. Lee, J.M. Robson, R.B. Moore, L. Nikkinen and V. Raut ..... 214 (1983) 333
- An extension to the Feynman method of detecting fission neutrons, Brunson, G.S. .... 214 (1983) 341
- Measurement of bremsstrahlung spectra from 25 MeV electrons on Ta as a function of radiator thickness and emission angle, Lambert, R.P., J.W. Jury and N.K. Sherman ..... 214 (1983) 349
- The application of lineshape analysis in plunger measurements (*Letter to the Editor*), Winter, G. .... 214 (1983) 537
- Proton-carbon effective analyzing power between 95 and 570 MeV, Aprile-Giboni, E., R. Hausamman, E. Heer, R. Hess, C. Lechanoine-Le Luc, W. Leo, S. Morenzoni, Y. Onel and D. Rapin ..... 215 (1983) 147
- Evaluation of a method for the determination of accurate transition energies in the  $(n, \gamma)$  reaction, Kennett, T.J., W.V. Prestwich, R.J. Tervo and J.S. Tsai ..... 215 (1983) 159
- A simple beam-energy homogenizer and automatic measurement of excitation functions, Ogawa, M., T. Matsuzaki, Y. Ozawa and E. Arai ..... 215 (1983) 167
- Utilization of Fe-filtered neutron beam for total cross section measurements up to 1 MeV, Tsubone, I., Y. Nakajima, Y. Furuta and Y. Kanda ..... 215 (1983) 171
- A single-wire proportional counter with delay-line position readout for the focal plane of a magnetic spectrograph, Koide, K., A. Bairrio Nuevo, Jr., H. Takai, B. Marechal and O. Dietzsch ..... 215 (1983) 177
- On the development of liquid ionization detectors as spectroscopic instruments, Lindblad, Th., L. Bagge, Å. Engström, J. Białkowski, C.R. Gruhn, W. Pang, M. Roach and R. Loveman ..... 215 (1983) 183
- Calibration of Homalite CR-39 plastic track detector for light particle spectrometry and its application in studying the  $(n, \alpha)$  and  $(n, p)$  reaction on  $^{51}\text{V}$ , Khan, N.A., H.A. Khan, M. Ahmad, K. Jamil, M. Anwar, S.M. Saleem and K. Gul ..... 215 (1983) 193
- The decay scheme of  $^{64}\text{Cu}$ , Christmas, P., S.M. Judge, T.B. Ryves, D. Smith and G. Winkler ..... 215 (1983) 397
- On the identification of gamma rays from the  $^{232}\text{Th}$  decay, Roy, J.-C., L. Breton, J.-E. Côté and J. Turcotte ... 215 (1983) 409
- A comparison of methods for determining neutron detector efficiencies at medium energies, Watson, J.W., B.D. Anderson, A.R. Baldwin, C. Lebo, B. Flanders, W. Pairsuwan, R. Madey and C.C. Foster ..... 215 (1983) 413
- Techniques for measuring neutron scattering cross sections with a beam swinger, Devito, R.P., S.M. Austin, U.E.P. Berg, W. Sterrenburg and L.E. Young ..... 215 (1983) 423
- Optimization of cluster-counting transition radiation detectors, Fabjan, C.W., W. Willis, S. Maiburov, A. Shmeleva, V. Chernyatin and B. Dolgoshein ..... 216 (1983) 105
- A recoil proton detector using cylindrical proportional chambers and scintillator counters, Hartner, G.F., D.E. Blodgett, S.B. Bracker, B.R. Kumar, G.J. Luste, J.F. Martin, W.J. Spalding, K.K. Shahbazian, R.A. Sheperd, A.J. Stacey and C.J. Zorn ..... 216 (1983) 113
- A plastic scintillation counter for applications in radio-gas-chromatography, Knickelbein, M.B., J.W. Root and C.R. Hurlbut ..... 216 (1983) 121
- Resistive plastic cathode for proportional chamber, Hayashide, Y., N. Kim, K. Kondo, S. Miyashita, H. Miyata, F. Sato, M. Yoshino, M. Mishina, F. Takasaki and M. Atac ..... 216 (1983) 127
- Limited streamer mode operation of extruded resistive cathode gas counter, Hayashide, Y., M. Ito, N. Kim, K. Kondo, S. Miyashita, M. Shimura and M. Shibata ..... 216 (1983) 135
- The response of large NaI(Tl) detectors to fast neutrons, Van Ruyven, J.J., Z. Sujkowski, W.H.A. Hesselink and H. Verheul ..... 216 (1983) 141
- Cross-section systematics for nuclide production at a medium energy spallation neutron facility, Mirzadeh, S., P.P. Parekh, S. Katcoff and Y.Y. Chu ..... 216 (1983) 149
- Three and four body nuclear reactions in special kinematical conditions, Blagus, S., D. Miljanić and D. Rendić .. 216 (1983) 415
- Two-dimensional focal plane counter with induction readout, Fujita, Y., K. Nagayama, M. Fujiwara, S. Morinobu, T. Yamazaki and H. Ikegami ..... 217 (1983) 441
- A versatile noble-gas scintillator detector for Coulomb excitation experiments, Kuzminski, J., R. Holzmann, M. Loiselet, M.A. Van Hove and J. Vervier ..... 217 (1983) 449



Nuclear orientation facility for the study of the angular distribution of $\gamma$ radiation and $\beta$ particles emitted by polarized nuclei, Chirovsky, L.M., W.-P. Lee, A.M. Sabbas, A.J. Becker, J.L. Groves and C.S. Wu . . . . .	219 (1984) 103
Determination of the $\alpha$ -induced K-shell ionization cross sections from the measured intensity ratios of K X-rays to ( $2^+ 0^+$ ) $\gamma$ -rays in even deformed nuclei, Sujkowski, Z., D. Chmielewska and M.N. Harakeh . . . . .	219 (1984) 111
Gamma-ray spectroscopy using small, cooled bismuth germanate scintillators and silicon photodiodes, Derenzo, S.E. . . . .	219 (1984) 117
Precision measurements of gamma-ray intensities. VI. $^{120}\text{Sb}$ , $^{124}\text{Sb}$ and $^{125}\text{Sb}$ , Iwata, Y., M. Yasuhara, K. Maeda and Y. Yoshizawa . . . . .	219 (1984) 123
Semiempirical formulae for $\gamma$ -ray absorption coefficients for high-Z scintillators, Massaro, E., G. Auriemma and E. Costa . . . . .	219 (1984) 134
Self-absorption of neutron capture gamma-rays in gold samples, Wisshak, K., G. Walter and F. Käppeler . . . . .	219 (1984) 136
On-line optimisation of the resolution of a magnetic spectrometer ( <i>Letter to the Editor</i> ), Sanderson, N.E., R.A. Cunningham, J.N. Mo, R. Chapman and J.L. Durell . . . . .	219 (1984) 250
Determination of L capture probability from L X-ray-gamma ray summing in a gamma-X detector ( <i>Letter to the Editor</i> ), Mukherjee, P., C. Samanta and I. Mukherjee . . . . .	219 (1984) 253
Study of methods for reducing the intrinsic background of a neutron detector for rare spontaneous fission events, Sokol, E.A., P.N. Chuong, V.I. Smirnov, M.P. Ivanov, G.M. Ter-Akopian and L.P. Chelnokov . . . . .	219 (1984) 336
Satellite peaks in high-resolution alpha-particle spectra of decay-chain members measured with silicon surface-barrier detectors, Nylandsted Larsen, A., G. Bortels and B. Denecke . . . . .	219 (1984) 339
The TRIUMF low energy pion spectrometer and channel, Sobie, R.J., T.E. Drake, B.M. Barnett, K.L. Erdman, W. Gyles, R.R. Johnson, H.W. Roser, R. Tacik, E.W. Blackmore, D.R. Gill, S. Martin, C.A. Wiedner and T. Masterson . . . . .	219 (1984) 501
Large solid angle Bragg-curve spectrometer, McDonald, R.J., L.G. Sobotka, Z.Q. Yao, G.J. Wozniak and G. Guarino . . . . .	219 (1984) 508
An electrostatic separator for heavy recoil nuclei, Dahlinger, M., W. Bonin, E. Kankeleit and H. Backe . . . . .	219 (1984) 513
Absolute calibration of a Compton polarimeter for 110 keV $\gamma$ -rays, Elsener, K., V. König, W. Gruebler and J. Eberl . . . . .	219 (1984) 519
Electron spectroscopy in coincidence with protons from the (t,p) reaction, Decman, D.J., E.A. Henry, J. Kantele, L.G. Mann, W. Stöfl, R.J. Estep and L.E. Ussery . . . . .	219 (1984) 523
Design of a bismuth germanate anti-Compton spectrometer and its use in nuclear spectroscopy, Lieder, R.M., H. Jäger, A. Neskakis, T. Venkova and C. Michel . . . . .	220 (1984) 363
A high-energy gamma-ray detector system for fast neutron-induced reactions, Wender, S.A., G.F. Auchampaugh, J.F. Wilkerson, N.W. Hill, L.R. Nilsson and N.R. Roberson . . . . .	220 (1984) 371
Position-sensitive counter telescope for light and heavy ions, Daehnick, W.W. and J.M. Niedra . . . . .	220 (1984) 377
Measurement of ejectile polarization in heavy ion reactions via beta-ray asymmetry, Asahi, K., M. Ishihara, H. Kamitsubo, N. Takahashi, Y. Nojiri, T. Minamisono, A. Mizobuchi and K. Sugimoto . . . . .	220 (1984) 389
A medium size polarised deuteron target, Kiselev, Yu.F., V.V. Polyakov, A.I. Kovalev, E.I. Bunyatova, N.S. Borisov, V.Yu. Trautman, K. Werner and N.G. Kozlenko . . . . .	220 (1984) 399
A moderating $^6\text{Li}$ -glass neutron detector, Jensen, G.L., D.R. Dixon, K. Bruening and J. Bart Czirr . . . . .	220 (1984) 406
Arrangements of parallel plate avalanche detectors for electrofission and photofission experiments, Drexler, J., R.D. Fischer, R. Heil, K. Huber, U. Kneissl, G. Mank, R. Ratzek, H. Ries, H. Ströher, T. Weber and W. Wilke . . . . .	220 (1984) 409
A double ionization chamber for fission fragment detection, Chepigin, V.I., S.V. Stepantsov, S. Nagy, G.M. Ter-Akopian and A.S. Voronin . . . . .	220 (1984) 419
A large solid angle ionization chamber with ring counter geometry, Weller, A. and P. Egelhof . . . . .	220 (1984) 425
A new time-of-flight mass spectrometer, Su Ching-Shen . . . . .	220 (1984) 431

## Computer Automated Measurement and Control

INS real-time data processing composite system using large scale general purpose computers, Kokame, J., M. Takano, T. Oshikubo, K. Chiba, K. Ukai, A. Imanishi, M. Yasue, K. Omata, S.-I. Watanabe, H. Hirai, M. Ogawa, N. Ishida, K. Kamakura, M. Fujita and K. Koba . . . . .	213 (1983) 317
A fast arithmetical unit used with microprogrammable processors, Lecoq, J., J.D. Berst, J.P. Froberger, J.M. Meyer and M. Perrin . . . . .	213 (1983) 329
A multi-microprocessor neutron spectrometer computer interface system, Berliner, R., J. Sudol and G. Moum . . . . .	213 (1983) 333
An automatic gamma spectrometer for activation analysis, Vänskä, L., R.J. Rosenberg and V. Pitkänen . . . . .	213 (1983) 343
Simple serial data link ( <i>Letter to the Editor</i> ), Gottschalk, B. . . . .	213 (1983) 547
Real time spectrum stabilization by software ( <i>Letter to the Editor</i> ), Kosina, Z. . . . .	213 (1983) 551
A microprocessor controlled spectrometer for frequency modulation Mössbauer measurements, Obenhuber, Th., A. Forster, W. Potzel and G.M. Kalvius . . . . .	214 (1983) 361

- An interactive system for emulsion data acquisition, Baroni, G., S. Di Liberto, P. Ginobbi, F. Meddi, S. Petrera, G. Romano and C. Sgarbi ..... 214 (1983) 381
- A laser system for monitoring photomultiplier tubes in counter arrays, Smith, P. .... 214 (1983) 385
- Automatic scanning of solid state nuclear track detectors at low track density, Zhang, H.X., T.R. Yeh and H. Lancman ..... 214 (1983) 391
- Interfacing a multichannel analyser to a mainframe computer, Cooper, P.N. .... 215 (1983) 431
- Electronics for low-level counting using a microcomputer, Schlosser, P., B. Kromer and W. Roether ..... 216 (1983) 155
- A CAMAC datarate supervision module, Wikne, J.C. .... 216 (1983) 161
- Simple routing interface connecting four 12-bit analog-to-digital converters to a 16k CAMAC memory module, Schemmerling, K., J. Ahlert, M. Schumacher and F. Smend ..... 216 (1983) 165
- A microcomputer system for measurement and control, Brendle, M. .... 219 (1984) 347
- A fast and flexible focal-plane detection system for electron scattering experiments, Distelbrink, J.H.J., E. Kok, H. Blok, J.L. Visschers and P.K.A. De Witt Huberts ..... 220 (1984) 433
- ## Nuclear Electronics
- A modulator power supply for electrochemical etching (*Letter to the Editor*), Uyttenhove, J. and C. Van den Bossche ..... 211 (1983) 219
- Determination of local absolute detection efficiency of a Ceratron with  $^{55}\text{Fe}$  Auger electrons, Mori, C., T. Sugiyama and T. Watanabe ..... 211 (1983) 407
- Timing characteristics of pulses from Ge(Li) detector and their simulation by a Monte Carlo method, Křištiak, J., S. Tomek and V. Hnatowicz ..... 211 (1983) 413
- Light attenuation effects in small NE213 scintillation counters, Annand, J.R.M. and R.B. Galloway ..... 211 (1983) 421
- Background compensated GM counter for the measurement of low level  $\beta$ -activity, Mori, C., H. Kumanomido and T. Watanabe ..... 211 (1983) 429
- Anomalous current in a parallel plate secondary electron monitor (*Letter to the Editor*), Ohkuma, J. and M. Kawanishi ..... 211 (1983) 547
- A digital pulse-pair detecting circuit (*Letter to the Editor*), Bell, Z.M., J.W. McConnell and E.D. Carroll ..... 211 (1983) 551
- Gated time projection chamber, Némethy, P., P.J. Oddone, N. Toge and A. Ishibashi ..... 212 (1983) 273
- Pulse triggering mechanism of air proportional counters, Aoyama, T., T. Mori and T. Watanabe ..... 212 (1983) 281
- Growth of the avalanche along the anode wire in a gas counter – II, Sanada, J. .... 212 (1983) 291
- Plasma delay of  $^{238}\text{U}$  ions in surface barrier detectors, Neidel, H.-O., H. Henschel, H. Geissel and Y. Laichter .. 212 (1983) 299
- A channel profile analyser, Gobbur, S.G. .... 213 (1983) 349
- A time averaged background compensator for Geiger–Müller counters (*Letter to the Editor*), Bhattacharya, R.C. and P.K. Ghosh ..... 213 (1983) 553
- A fall-focussing gravity spectrometer for very slow neutrons (*Letter to the Editor*), Utsoro, M. .... 213 (1983) 557
- Self adapting ratemeter, Vankov, I.D., G.S. Ganev, R.M. Ivanov and M. Müller ..... 214 (1983) 395
- Large volume neutron detectors with subnanosecond time dispersions, Madey, R., J.W. Watson, M. Ahmad, B.D. Anderson, A.R. Baldwin, A.L. Casson, W. Casson, R.A. Cecil, A. Fazely, J.M. Knudson, C. Lebo, W. Pairsuwan, P.J. Pella, J.C. Varga and T.R. Witten ..... 214 (1983) 401
- Instrumental limit and number of effective granules in superheated superconducting detectors, Hrisoho, A. and G. Waysand ..... 214 (1983) 415
- The absolute efficiency of a 7.6- by 7.6-cm bismuth germanate scintillator for 15-MeV gamma rays (*Letter to the Editor*), Roberson, N.R., S.A. Wender and D.M. Drake ..... 214 (1983) 541
- Random pulser based on photon counting, Takeuchi, S. and T. Nagai ..... 215 (1983) 199
- A power modulator with a nonsaturated transformer switching device, Gippetto, C. .... 215 (1983) 203
- Gain characteristics of a microchannel plate and a channel-electron multiplier for low energy multiply charged ions, Takagi, S., T. Iwai, Y. Kaneko, M. Kimura, N. Kobayashi, A. Matsumoto, S. Ohtani, K. Okuno, H. Tawara and S. Tsurubuchi ..... 215 (1983) 207
- Silicon X-ray sensors with modified electrode structures, Naruse, Y. and M. Sekimura ..... 215 (1983) 213
- Rise and plasma times in semiconductor detectors, Delaney, C.F.G. and E.C. Finch ..... 215 (1983) 219
- A laser-based TOF monitoring system using a high-speed vacuum photodiode (*Letter to the Editor*), Fujii, T., Y. Hashimoto, T. Kageyama, K. Nakamura, F. Sai, S. Sakamoto, S. Sato, T. Takahashi, T. Tanimori, Y. Umeda and S.S. Yamamoto ..... 215 (1983) 357
- New style of photomultiplier tube voltage divider, Randers-Pehrson, G., R.W. Finlay and D.E. Carter ..... 215 (1983) 433
- The parallel grid avalanche counter, Fabris, D., G. Fortuna, F. Gramegna, G. Prete and G. Viesti ..... 216 (1983) 167
- Alternatives to coaxial cable for delaying analog and digital signals in a particle physics experiment, Sandoval, J.P., L. Bayliss, T. Gordon, G. Hart, C.M. Hoffman, G.E. Hogan, V.D. Sandberg, G.H. Sanders and S.L. Wilson ..... 216 (1983) 171
- Charge diffusion effects in CCD X-ray detectors, I. Theory, Hopkinson, G.R. .... 216 (1983) 423

Charge diffusion effects in CCD X-ray detectors, II. Experimental results, Lumb, D.H. and G.R. Hopkinson . . .	216 (1983) 431
New proximity focusing photomultiplier resistant to high magnetic field, Orito, S., T. Kobayashi, K. Suzuki, M. Ito and A. Sawaki . . . . .	216 (1983) 439
Gas amplification factor in Kr + iso-pentane filled proportional counters, Kowalski, T.Z. . . . .	216 (1983) 447
Preamplifiers with pulsed optical feedback as a source of errors in instrumental activation analysis ( <i>Letter to the Editor</i> ) Bode, P. and M. De Bruin . . . . .	216 (1983) 529
Timing properties of a R1294Z microchannel plate photomultiplier, Moszyński, M., J. Vacher and R. Odru . . . .	217 (1983) 453
Pulse shaping for fast coincidence with NaI(Tl) detectors ( <i>Letter to the Editor</i> ), Bose, S., B.K. Sinha and R. Bhattacharya . . . . .	217 (1983) 555
Silicon photodiode detection of bismuth germanate scintillation light, Groom, D.E. . . . .	219 (1984) 141
An investigation of two position-sensitive PPACs, Lindgren, L.J. and A. Sandell . . . . .	219 (1984) 149
Proposal for a fast, zero suppressing circuit for the digitization of analog pulses over long memory times, Bourgeois, F. . . . .	219 (1984) 153
Position integral linearity of charge-division type position-sensing system and a method to obtain the total charge signal, Matoba, M. and T. Sakae . . . . .	219 (1984) 160
An inexpensive method to increase the counting rate of a $^{57}\text{Co}$ Mössbauer spectrometer ( <i>Letter to the Editor</i> ), Jiménez-Domínguez, H., A. Cabral-Prieto, H. Flores-Llamas, S. Galindo and F.J. Ramírez-Jiménez . . . . .	219 (1984) 256
Time and energy measurement with charge integrating ADCs ( <i>Letter to the Editor</i> ), Venema, W.Z. . . . .	219 (1984) 257
Tube-to-tube variations in time distribution of afterpulses in high gain first dynode PMTs, Yamashita, M. and S. Takeuchi . . . . .	219 (1984) 353
A delay-line position readout for a heavy-ion proportional counter, Van Engelen, C.P.M., R.O. Blaauboer and R. Kamermans . . . . .	219 (1984) 529
Avalanche fluctuations in a uniform field proportional counter filled with the Penning mixture neon–argon, Sephton, J.P., M.J.L. Turner and J.W. Leake . . . . .	219 (1984) 534
An interpolating filter for centroid finding of induced charge in MWPCs with strip cathodes, Gatti, E., A. Longoni and V. Radeka . . . . .	220 (1984) 445
Other magic gas mixtures for multiwire proportional chambers, Koori, N., S. Oda, K. Kawamura, M. Fujiwara, K. Nagayama, N. Takeda, Y. Fujita, I. Katayama, S. Morinobu, T. Yamazaki and H. Ikegami . . . . .	220 (1984) 453
A fast high resolution ADC based on the flash type with a special error correcting technique, Liang Xiao-Zhong and Cao Jing-Xi . . . . .	220 (1984) 457

## Numerical and Data Analysis

Fitting tracks in wire chambers using the Chebyshev norm instead of least squares, James, F. . . . .	211 (1983) 145
Recommended treatment of precision measurements related to nuclear energy levels and atomic masses, Cohen, E.R. and A.H. Wapstra . . . . .	211 (1983) 153
Least-squares analysis of nuclear reaction spectra, Franc, P., J. Křemének, Š. Piskoř and W. Schäferlingová . . . .	211 (1983) 159
Counting anticoincidences to reduce statistical uncertainty in the calibration of a multiplicity detector, Peelie, R.W. and R.R. Spencer . . . . .	211 (1983) 167
A non-iterative method for fitting circular arcs to measured points ( <i>Letter to the Editor</i> ), Crawford, J.F. . . . .	211 (1983) 223
A simplified method for cross correlation power spectrum analysis, Horiuchi, N. . . . .	211 (1983) 433
Efficient algorithms for estimating the width of nearly normal distributions, Akerlof, C.W. . . . .	211 (1983) 439
Comparison of Blaugrund and Monte Carlo centroid-shift calculations, Latta, B.M. . . . .	211 (1983) 447
Finite sample size corrections to fast neutron analysing power and differential cross section data taken using large scattering samples, Annand, J.R.M. and R.B. Galloway . . . . .	211 (1983) 453
Calculation of the ORELA neutron moderator spectrum and resolution function, Coceva, C., R. Simonini and D.K. Olsen . . . . .	211 (1983) 459
Neutron spectrum calculations for a fast-neutron generator having an annular ion source, Bahal, B.M. and H.-U. Fanger . . . . .	211 (1983) 469
Effect of Poisson weighting on decay parameters: numerical results as noise level is increased ( <i>Letter to the Editor</i> ), Kalantar, A.H. . . . .	211 (1983) 555
Binomial vs Poisson statistics in radiation studies, Foster, J., K. Kouris, I.P. Matthews and N.M. Spyrou . . . . .	212 (1983) 301
Experimental dead-time distortions of Poisson processes, Faraci, G. and A.R. Pennisi . . . . .	212 (1983) 307
Two-dimensional curve fitting in counting experiments, Awaya, T. . . . .	212 (1983) 311
Upper limit of peak area, Helene, O. . . . .	212 (1983) 319
Profile deconvolution method for small computers, Verma, R. . . . .	212 (1983) 323
Effect of charge carrier collection on the shape of the amplitude spectrum of coaxial Ge(Li) detectors, Katkov, V.P. and A.I. Krupman . . . . .	212 (1983) 327
Removal of interference effect in the calculation of photonuclear cross-sections, Ahsan, M.H., N. Dylewski, S.A. Siddiqui and H.H. Thies . . . . .	212 (1983) 333
Multiple scattering from an infinite plane slab, Soper, A.K. . . . .	212 (1983) 337



- Slowing down of neutrons from a pulsed, point, monoenergetic source in a hydrogenous medium, Golub, R. and A.D. Taylor ..... 212 (1983) 349
- Enhanced intensity of 7.6 MeV gamma rays from an  $^{241}\text{Am}/\text{Be}$  source in a multilayered  $\text{CH}_2\text{--Fe}$  shield (*Letter to the Editor*), Atwater, H.F. .... 212 (1983) 555
- A modification to the Penfold–Leiss method of cross-section unfolding, Findlay, D.J.S. .... 213 (1983) 353
- Measurement and evaluation of neutron spectra above 0.1 MeV in the JMTR, Sakurai, K. .... 213 (1983) 359
- The determination of X-ray spectra from attenuation data. Part I: The potentials of various methods, Kramer, H.M. and H. Von Seggern ..... 213 (1983) 373
- On the transfer function of an electromechanical transducer: an application to the Mössbauer velocity drive, Yadagiri Reddy, P., P. Narayan Reddy, Ch. Seshakumari and K. Rama Reddy ..... 213 (1983) 381
- Optimum sample thickness for total cross section measurements (*Letter to the Editor*), Sears, V.F. .... 213 (1983) 561
- Calibration of histograms in nuclear structure physics, Wooff, C. .... 214 (1983) 419
- Simultaneous determination of exponential background and Gaussian peak functions in gamma ray scintillation spectrometers by maximum likelihood technique, Eisler, P., T. Lwin, G. Nelson and S. Youl ..... 214 (1983) 421
- Background estimation for gamma-ray spectrometry, Burgess, D.D. and R.J. Tervo ..... 214 (1983) 431
- A pseudorandom pulser technique for the correction of dead-time and pile-up losses in  $\gamma$ -ray spectrometry, Dörfel, G., W. Kluge and M. Kubsch ..... 214 (1983) 435
- Derivative method unfolding of gamma-ray spectra from NE-213 spectrometers, Korsah, J.K. and W.H. Miller ..... 214 (1983) 441
- The determination of X-ray spectra from attenuation data, Part II. Experimental results, Kramer, H.M. .... 214 (1983) 445
- The analysis of radioactive decay with a small number of counts by the method of maximum likelihood, Cleveland, B.T. .... 214 (1983) 451
- Limitation of the Mellin transform for small angle scattering by nearly spherical particles, Melone, S., P. Puliti and F. Rustichelli ..... 214 (1983) 459
- Comments on “Neutron spectral unfolding using the Monte Carlo method” (*Letter to the Editor*), Chambless, D.A. and J.A. Broadway ..... 214 (1983) 543
- Reply to Chambless and Broadway (*Letter to the Editor*), O’Brien, K. and R. Sanna ..... 214 (1983) 547
- A new method for the correction of  $\gamma\text{--}\gamma$  correlation matrices, Arciszewski, H.F.R. and J. Knoester ..... 215 (1983) 225
- Generation of precise scintillator response curves by an interpolation technique, Tominaga, S. .... 215 (1983) 231
- Effects of finite chopper thickness in correlation time-of-flight spectrometry of thermal neutrons, Pöyry, H. .... 215 (1983) 235
- On non-iterative methods for treating single exponential decay data with background, Kalantar, A.H. .... 215 (1983) 437
- Method of convergent weights – an iterative procedure for solving Fredholm’s integral equations of the first kind, Kondor, A. .... 216 (1983) 177
- Improvement of resolution function as an inverse problem, Zhigunov, V.P. .... 216 (1983) 183
- Real time spectrum analysis, Blunden, A., D.G. O’Prey and W.H. Tait ..... 216 (1983) 191
- An automated background estimation procedure for gamma ray spectra, Tervo, R.J., T.J. Kennett and W.V. Prestwich ..... 216 (1983) 205
- Calibration for measurements with background correction applied to uranium-235 enrichment, Liggett, W. .... 216 (1983) 455
- Effects of two consecutive non-extended dead times (*Letter to the Editor*) Faraci, G. and A.R. Pennisi ..... 216 (1983) 531
- Radioactive decay viewed through an extending dead time, Mylon, K.R.D. and G.W. McBeth ..... 217 (1983) 459
- Monte Carlo simulated detector responses to gamma radiations coming from extended sources, Capponi, M., I. Massa, M. Piccinini and M. Poli ..... 217 (1983) 465
- Secondary light emission by noble gases, Alegria Feio, M. and A.J.P.L. Policarpo ..... 217 (1983) 473
- Idealized pulse pileup effects on energy spectra, Tenney, F.H. .... 219 (1984) 165
- Adapting gamma-spectrum analysis program SAMPO for microcomputers, Aarnio, P.A., J.T. Routti, J.V. Sandberg and M.J. Winberg ..... 219 (1984) 173
- A possible improvement in the measurement of the ratio of particle velocity to the velocity of light, Petrillo, L. and M. Severi ..... 219 (1984) 176
- Prior distributions for Bayesian estimations of positive quantities (*Letter to the Editor*), Vincent, C.H. .... 219 (1984) 259
- Estimation of peak intensities from frequency filtered total scattering data of neutrons obtained by the reverse Fourier method, Hiismäki, P. and O. Antson ..... 219 (1984) 356
- Evaluation of proton-recoil-spectra including inverse filtering in the Fourier domain, Böttcher, J., A. Feigel, E. Finckh, C. Forstner, W. Jauman, G. Schall, H. Scheuring, U. Schneidereit, K. Stauber, P. Tröger and A. Weipert ..... 219 (1984) 369
- Resonance detectors for time experiments, Vapirev, E.I., P.S. Kamenov, V. Dimitrov and D. Balabanski ..... 219 (1984) 376
- Optimum sample thickness for total cross section measurements (*Letter to the Editor*), Vincent, C.H. .... 219 (1984) 440
- Random walk approach for neutron diffusion with strong absorption (*Letter to the Editor*), Cáceres, M.O. and H. Wio ..... 219 (1984) 441
- Hryniewicz’s third relation and its application in the measurements of magnetic moments (*Letter to the Editor*), Sinha, B.K. and R. Bhattacharyya ..... 219 (1984) 443
- A deconvolution procedure for liquid structure determination, Howells, W.S. .... 219 (1984) 543
- On the resolution function of crystal spectrometers for neutron scattering, Grimm, H. .... 219 (1984) 553

- Unfolding bismuth-germanate pulse-height distributions to determine gamma-ray flux spectra and dose rates, Moss, C.E., E.J. Dowdy, A.E. Evans, M.E. Hamm, M.C. Lucas and E.R. Shunk ..... 219 (1984) 558
- Measurement of the electronic absorption coefficient for  $^{57}\text{Co}$  14.4 keV gamma photons in aluminium using the Mössbauer effect as a monochromator, Rajan, N. and A.K. Nigam ..... 219 (1984) 565
- Variation in fwhm of gamma photopeak resolution with sample composition during neutron activation analysis using a low-energy photon spectrometer (*Letter to the Editor*), Potts, P.J. and T. Twomey ..... 219 (1984) 601
- Cubic spline techniques for fitting X-ray cross sections, Yacout, A.M., R.P. Gardner and K. Verghese ..... 220 (1984) 461
- Data reduction from experimental histograms, Falk, W.R. .... 220 (1984) 473
- Data analysis for a semiconductor beta ray spectrometer, Bom, V.R. .... 220 (1984) 479
- Application of multiple scattering theory to spark chamber type detectors, Bertsch, D.L. .... 220 (1984) 489
- Calculation of the collimated bremsstrahlung flux from thin radiators, Cottman, B.H., S.A. Dytman and J.A. Nelson ..... 220 (1984) 512
- Comparison of the results of neutron flux and energy measurements with the predictions of theoretical calculations for a coaxial 14 MeV neutron tube, Bahal, B.M. and H.-U. Fanger ..... 220 (1984) 517
- Study of the effect of scattered photons on attenuation coefficient measurements, Gayer, A. and S. Bukshpan .. 220 (1984) 525

## Fusion

- An arsenic-activation detector for bursts of 2.5 and 14 MeV neutrons, Jacobs, E.L., S.D. Bonaparte and P.D. Thacher ..... 213 (1983) 387
- A photoelectron spectrometer for measurement of electron plasma temperature, Gott, Yu.V., A.N. Silaev, R.R. Chistyakov and V.A. Shurygin ..... 214 (1983) 463
- A note on the interpretation of activation measurements on the Princeton Large Torus (*Letter to the Editor*), Strachan, J.D. and G. Zankl ..... 214 (1983) 551
- Time and space resolved neutron diagnostic systems for magnetically confined plasmas, Slaughter, D.R., H.S. Spracklen and R. Delvasto ..... 215 (1983) 443
- Un dispositif de mesure résolu dans le temps et en énergie, de la radioactivité induite par les électrons découplés d'un tokamak, Altman, M., P. Bonnel, M. Chatelier et L. Dubail ..... 215 (1983) 453
- Capillary discharge thermonuclear burner design, McCorkle, R.A. .... 215 (1983) 463
- A simple pressure gauge for tritium gas with high accuracy in the range  $10^{-3} \leq p \leq 10$  bar, Lässer, R. .... 215 (1983) 467
- Thermal neutron driven, 14.1 MeV neutron generators, Miller, W.H., W.S. Law and R.M. Brugger ..... 216 (1983) 219
- A tritium monitoring system using the coherent demodulation technique, Horiuchi, N. .... 217 (1983) 479
- The elastic scattering of 14 MeV neutrons in large samples of iron, Anvarian, S.T.P. and A.J. Cox ..... 217 (1983) 483
- A fast neutron spectrometer for D-D fusion neutron measurements at the Alcator C tokamak, Fisher, W.A., S.H. Chen, D. Gwinn and R.R. Parker ..... 219 (1984) 179

## Fission and Nuclear Reactors

- High energy proton interactions with Sr and Cs, De Felice, P., R. Ocone, A. Rindi, J. Tuyn, R. Deltenre and G. Roubaud ..... 212 (1983) 359
- Neutron multiplication measurements using moments of the neutron counting distribution, Robba, A.A., E.J. Dowdy and H.F. Atwater ..... 215 (1983) 473
- Neutron multiplicity and multiplication measurements, Krick, M.S. and J.E. Swansen ..... 219 (1984) 384
- La constitution de la densité d'échauffement d'un thermomètre gamma, Hantouche, C. .... 219 (1984) 394
- Suppression of "spill-over" by roughened neutron mirrors (*Letter to the Editor*), Bates, J.C. .... 219 (1984) 445
- On ultracold neutron generation in material bottles (*Letter to the Editor*), Stoica, A.D. and A. Jipa ..... 219 (1984) 447
- A mass spectrometer for fission fragments based on time-of-flight energy measurements, Oed, A., P. Geltenbort, R. Brissot, F. Gönnenwein, P. Perrin, E. Aker and D. Engelhardt ..... 219 (1984) 569
- A parallel plate  $^{10}\text{B}$  neutron detector, Todd, J.H., L.W. Weston and G.J. Dixon ..... 219 (1984) 575
- The application of thermal neutron capture gamma rays to matrix identification in a transuranic waste assay system based on an electron accelerator, Close, D.A., L.A. Franks and S.M. Kocinski ..... 220 (1984) 531
- Measurement of energy albedo of backscattered photons using a proportional response photon counter, Mitra, S., M. Biswas and S.C. Roy ..... 220 (1984) 537

## Dosimetry, Space Radiation and Medical Applications

- A combined real time wide energy range neutron dosimeter and survey meter for high neutron dose rates with Si surface barrier detectors, Eisen, Y., G. Engler, E. Ovadaï and Y. Shamai ..... 211 (1983) 171
- Fast large aperture camera and data acquisition system with applications in astrophysics, particle physics and nuclear medicine, Fegan, D.J., D. McLaughlin, J. Clear, M.F. Cawley and N.A. Porter ..... 211 (1983) 179



- DOSIS: a computer program for the calculation of absorbed dose in photon and electron beams from ionization measurements in a phantom, Andreo, P. . . . . 211 (1983) 481
- Spatial energy dissipation profiles,  $W$  values, backscatter coefficients, and ranges for low-energy electrons in methane, Waibel, E. and B. Grosswendt . . . . . 211 (1983) 487
- Performance characteristics of a fluorescent gated gas scintillation proportional counter, Sims, M.R., G. Manzo, A. Peacock and B.G. Taylor . . . . . 211 (1983) 499
- Fast protons in neutron calibration fields (*Letter to the Editor*), Guldbakke, S. and H. Lesiecki . . . . . 211 (1983) 559
- A gamma-camera distortion corrector using a programmable on-line microcomputer (*Letter to the Editor*), Mine, P., L. Hadjeris, T. Huang-Xuan, R. Marbot, F. Soussaline, J. Jeanjean and H. Nguyen Ngoc . . . . . 211 (1983) 561
- Inter-laboratory standardization of glass dosimeters, Modgil, S.K. and H.S. Virk . . . . . 212 (1983) 367
- Bulk response of some polymeric nuclear track detectors to ionizing radiation, Lück, H.B. . . . . 212 (1983) 371
- Opto-electronic system for automatic track counting in plastic SSNTD, Flores, R., L. Ortiz, M. Moreno, G. Corkidi, A. Solar and M. Balcazar-Garcia . . . . . 212 (1983) 375
- Fast neutron detection with  $\text{Al}_2\text{O}_3$  thermoluminescence dosimeter, Ranogajec-Komor, M., M. Osvay, I. Dvornik and T. Biró . . . . . 212 (1983) 383
- Response characteristics of cellulose nitrate track-detectors to radon and radon-daughter mixtures, Knöfel, T.M.J., J.J.S. Estrada, O.A.P. Tavares, J.B. Martins and A. Goodwin . . . . . 212 (1983) 387
- Radon concentration and exhalation measurement with a semiconductor detector and an electrostatic precipitator working in a closed circulation system, Wójcik, M. and L. Morawska . . . . . 212 (1983) 393
- Large scintillation cells for high sensitivity radon concentration measurements, Cohen, B.L., M. El Ganayni and E.S. Cohen . . . . . 212 (1983) 403
- An alpha-particle imaging system for detecting plutonium contamination, Iida, T., S. Yamamoto, Y. Ikebe, A. Seki, K. Nakata, M. Ebana, M. Kanamori and M. Yoshida . . . . . 212 (1983) 413
- Gamma dosimetry using lyoluminescence of Tris (hydroxymethyl) aminomethane, Mehta, S.K., I.K. Oommen, S. Sengupta and S.D. Soman . . . . . 213 (1983) 393
- An imaging gas scintillation proportional counter for use in X-ray astronomy, Hailey, C.J., W.H.-M. Ku and M.H. Vartanian . . . . . 213 (1983) 397
- A proportional counter with one dimensional position sensitivity for image scanning in the soft X-ray region, Stephan, K.H. and M. Henne . . . . . 213 (1983) 411
- Analysis of a camera based SPECT system, Beck, J.W. . . . . 213 (1983) 415
- The spectral shape and the components of the background in in vivo neutron capture prompt gamma ray analysis, Vartsky, D., K.J. Ellis, L. Wielopolski and S.H. Cohn . . . . . 213 (1983) 437
- Life performance of an EPR-insulated power cable exposed in service beyond 3 MGy in a high-level radiation area, Grüb, R., B. Langeset, P. Maier and H. Schönbacher . . . . . 214 (1983) 469
- Design and performance of a one square meter proportional counter system for hard X-ray astronomy, Bazzano, A., L. Boccaccini, C.D. La Padula, M. Mastropietro, R. Patriarca, F. Polcaro, P. Ubertini and R.K. Manchanda . . . . . 214 (1983) 481
- Three-dimensional beam scanning for proton therapy, Kanai, T., K. Kawachi, H. Matsuzawa and T. Inada . . . . 214 (1983) 491
- Tunneling afterglow and anomalous fading in dosimetry with  $\text{CaSO}_4:\text{Dy}$  (*Letter to the Editor*), Visocekas, R., M. Ouchene and B. Gallois . . . . . 214 (1983) 553
- A method for precise charge measurements of relativistic light nuclei,  $Z \leq 3$ , in nuclear track emulsion, Bloomer, M.A., H.H. Heckman and Y.J. Karant . . . . . 215 (1983) 247
- Gamma-ray spectrometer aboard solar flare observation satellite HINOTORI, Yoshimori, M., K. Okudaira, Y. Hirasima and I. Kondo . . . . . 215 (1983) 255
- A balloon-borne instrument for high-resolution astrophysical spectroscopy in the 20–8000 keV energy range, Paciesas, W., R. Baker, D. Boclet, S. Brown, T. Cline, H. Costlow, Ph. Durouchoux, C. Ehrmann, N. Gehrels, J.M. Hameury, R. Haymes, B. Teegarden and J. Tueller . . . . . 215 (1983) 261
- An on-line video image processing system for real-time neutron radiography, Fujine, S., K. Yoneda and K. Kanda . . . . . 215 (1983) 277
- Measurement of mixed radon and thoron daughter concentrations in air, Zhang Chungxiang and Luo Daling . . 215 (1983) 481
- Multistep avalanche chamber for  $\beta$  radiochromatography, Cattai, A. . . . . 215 (1983) 489
- Neutron detection using MOS breakdown counters combined with fissile radiators, Dörschel, B., F. Pfützner, G. Streubel, J. Knorr and W. Paul . . . . . 216 (1983) 227
- Background gamma radiation in the energy region below 3 MeV at Mysore, Sanjeeviaiah, H., P. Venkataramaiah, K. Gopala, K.S. Gundu Rao and L. Paramesh . . . . . 216 (1983) 231
- Charges produced by high doses of light charged particles in registration properties of mica track detectors, Khan, H.A. and N.A. Khan . . . . . 216 (1983) 471
- Scintillator-fiber charged-particle track-imaging detector, Binns, W.R., M.H. Israel and J. Klarmann . . . . . 216 (1983) 475
- Neutron dose equivalent rates due to heavy ion beams, Clapier, F. and C.S. Zaidins . . . . . 217 (1983) 489
- Track characteristics and detection in borate glasses doped with fissionable material, Morsi, M.M., S. El-Konsol and M.A. Adawi . . . . . 217 (1983) 495



- Radiation damage and dose rate linearity response of a p-Si detector in 70 MeV protons, Rikner, G., E. Grusell, V. Kostjuchenko, V. Lukjashin and M. Lomanov . . . . . 217 (1983) 501
- A new method for discriminating  $\beta$ - and  $\gamma$ -doses in thick TL-dosimeters (*Letter to the Editor*), Sahre, P. . . . . 217 (1983) 525
- Elimination of chemiluminescence in liquid scintillation measurement, Takiue, M., M. Hayashi, T. Nataka and H. Ishikawa . . . . . 219 (1984) 192
- Cutting thin sheets of allyl diglycol carbonate (CR-39) with a CW CO<sub>2</sub> laser: instrumentation and parametric investigation, Kukreja, L.M., D.D. Bhawalkar, S. Biswas, N. Durgaprasad, P.J. Kajarekar, M.N. Vahia, J.S. Yadav, C. Basu and J.N. Goswami . . . . . 219 (1984) 196
- Soft X-ray energy resolution with microchannel plate detectors of high quantum detection efficiency, Fraser, G.W. and J.F. Pearson . . . . . 219 (1984) 199
- Application of a Ge(Li) gamma detector-cadmium radiator arrangement for low level neutron flux measurements, Rhode, J.I. and G. Gleason . . . . . 219 (1984) 406
- Analysis of chemical samples for environmental levels of radioactivity using a massively shielded 18% Ge(Li) system, Blanchard, F.A. and T.D. Lickly . . . . . 219 (1984) 413
- Contribution of plated-out <sup>218</sup>Po and <sup>214</sup>Po to measurements of airborne <sup>222</sup>Rn and daughters with plastic (CR-39) nuclear track detectors, Kahn, B., Zuoyuan Wang and E. Sensintaffar . . . . . 219 (1984) 419
- Investigations on the applicability of superheated drop detectors in neutron dosimetry, Apfel, R.E. and S.C. Roy . . . . . 219 (1984) 582
- The short-term fading of TLDs, Tsuda, M. and T. Mori . . . . . 219 (1984) 588
- Cadmium telluride [CdTe(Cl)] detectors and their geometrical characteristics in local disappearance measurements using radionuclides, Bojsen, J. . . . . 219 (1984) 592
- Determination of critical angles of etching and track registration efficiencies of track detectors, Khan, H.A. . . . . 220 (1984) 540
- Measurement of absolute efficiency of solid state track detectors for 14 MeV neutrons, Bose, A. and A.K. Chatterjee . . . . . 220 (1984) 547
- Line features in the background-ray spectrum in the range 0.05-10 MeV at balloon altitudes, Ayre, C.A., P.N. Bhat, Y.Q. Ma, R.M. Myers and M.G. Thompson . . . . . 220 (1984) 549
- Electron cloud sizes in gas-filled detectors, Den Boggende, A.J.F. and C.J. Schrijver . . . . . 220 (1984) 561
- Spatial sensitivity of a planar positron camera, Weathersby, P.K., S.S. Survanshi and P. Meyer . . . . . 220 (1984) 571
- A MWPC X-ray diffractometer facility for protein crystallography, Sobottka, S.E., G.G. Cornick, R.H. Kretsinger, R.G. Rains, W.A. Stephens and L.J. Weissman . . . . . 220 (1984) 575
- Contrast enhancement of fission fragment tracks for automatic counting by image analyzing microscopes (*Letter to the Editor*), Williams, F.H., J.M. Smith and R.R. Baerwolf . . . . . 220 (1984) 585

## Synchrotron Radiation Research

- Angular distributions of soft X-rays from the ETL-storage ring (*Letter to the Editor*), Suzuki, I.H., F. Sugawara and K. Sakihara . . . . . 211 (1983) 565
- Magnetic Compton scattering with circularly polarised synchrotron radiation, Holt, R.S. and M.J. Cooper . . . . . 213 (1983) 447
- Electron beam focusing effects and matching conditions in plane periodic magnets, Walker, R.P. . . . . 214 (1983) 497
- Production of circularly polarized light from synchrotron radiation in the vacuum ultraviolet region, Johnson, P.D. and N.V. Smith . . . . . 214 (1983) 505
- The synchrotron topography project (STP) at the National Synchrotron Light Source, Bilello, J.C., H. Chen, A.B. Hmelo, J.M. Liu, H.K. Birnbaum, P.J. Herley and R.E. Green, Jr. . . . . 215 (1983) 291
- Slow fluctuation of synchrotron radiation and bunch lengthening in SOR, Asaoka, S., G. Isoyama, H. Mikuni, Y. Miyahara and H. Nishimura . . . . . 215 (1983) 493
- Longitudinal stability limit for electron bunches in a double RF system, Chin, Y. . . . . 215 (1983) 501
- Microwave emission in the X-band, by means of an intense relativistic electron beam in a rippled magnetic field, Bizzarri, U., M. Martone, M. Pillon and A. Vignati . . . . . 215 (1983) 511
- A method for the quantitative determination of synchrotron radiation X-ray spectra for absolute XRF trace element detection, Tolkiehn, G. and W. Petersen . . . . . 215 (1983) 515
- Ray tracing of a high flux beamline, Bahrdr, J. and N. Schwentner . . . . . 216 (1983) 237
- Studies on the magnetic field of a permanent magnet undulator for a free electron laser, Luccio, A., P. Mortazavi and L. Yü . . . . . 219 (1984) 213
- An X-ray diffractometer for synchrotron radiation, Allocca, L., M. Iannuzzi and A. La Monaca . . . . . 219 (1984) 227
- A synchrotron radiation source with arbitrarily adjustable elliptical polarization, Kim, K.J. . . . . 219 (1984) 425
- A feedback control system for synchrotron radiation double crystal instruments, Krolzig, A., G. Materlik, M. Swars and J. Zegenhagen . . . . . 219 (1984) 430
- Optimization of multilayer soft X-ray mirrors (*Letter to the Editor*), Bruijn, M.P., J. Verhoeven and M.J. Van der Wiel . . . . . 219 (1984) 603

## Materials Studies

- An investigation of oxygen indiffusion during laser cleaning/annealing of silicon by means of the  $^{16}\text{O}(\alpha, \alpha_0)^{16}\text{O}$  resonance scattering, Wang, Z.L., J.F.M. Westendorp and F.W. Saris ..... 211 (1983) 193
- Position sensitive neutron detectors using  $^6\text{Li}$ -glass scintillators and fibre optic encoding, Niimura, N., K. Yamada, T. Kubota, A. Matsumoto and S. Hoshino ..... 211 (1983) 203
- Identification of low energy ions in CR-39 plastic track detectors, Grabez, B., R. Beckmann, P. Vater and R. Brandt ..... 211 (1983) 209
- A computer program for nuclear reaction analysis with the  $\text{D}(^3\text{He}, \alpha)\text{H}$  reaction (*Letter to the Editor*), Marcuso, T.L.M., S.J. Rothman, L.J. Nowicki and P. Baldo ..... 211 (1983) 227
- Further improvements in Mössbauer spectroscopy with lead loaded plastic scintillators (*Letter to the Editor*), Bressani, T., P. Macciotta, C. Muntoni and S. Serici ..... 211 (1983) 231
- Mass stopping powers of protons up to 200 MeV in some biologically important materials (*Letter to the Editor*), Mukherjee, B. .... 211 (1983) 235
- Tandem accelerator mass spectrometry of  $^{26}\text{Al}$  from an iron meteorite, Thomas, J., P. Parker, G. Herzog and D. Pal ..... 211 (1983) 511
- A statically bent silicon single crystal as a thermal neutron filter, Mikula, P., J. Kulda, J. Červená, B. Chalupa, B. Hašková and J. Vávra ..... 211 (1983) 519
- The thickness distortion of  $^{57}\text{Fe}$  backscatter Mössbauer spectra (*Letter to the Editor*), Fultz, B. and J.W. Morris, Jr. .... 211 (1983) 569
- Dose dependence in angular distributions of Ag and Au sputtered from an alloy target, Weller, M.R. .... 212 (1983) 419
- Uncertainties in thick-target PIXE analysis, Campbell, J.L., J.A. Cookson and H. Paul ..... 212 (1983) 427
- Absolute  $\alpha$ -induced thick-target gamma-ray yields for the elemental analysis of light elements, Lappalainen, R., A. Anttila and J. Räisänen ..... 212 (1983) 441
- Particle-size effects in non-destructive material assay by gamma-ray absorptiometry. I. Theoretical model, The, H.L., W. Michaelis and H.-U. Fanger ..... 212 (1983) 445
- Application of coincidence techniques to X-ray fluorescence analysis, Puumalainen, P. and P. Sikanen ..... 212 (1983) 463
- Polarisation properties of bremsstrahlung produced by electron opaque targets of low-Z-elements with application to X-ray fluorescence analysis, Sikanen, P. and P. Puumalainen ..... 212 (1983) 469
- Size effect of powdered sample on EXAFS amplitude, Lu, K. and E.A. Stern ..... 212 (1983) 475
- On the use of cellulose nitrate as solid state nuclear track detector. Part I: Detector preparation and etching behaviour, Lück, H.B. .... 212 (1983) 479
- On the use of cellulose nitrate as solid state nuclear track detector. Part II: Response to light particles and applications, Lück, H.B. .... 212 (1983) 483
- Ion implanted nuclear radiation detectors passivated with anodic silicon oxide, Von Borany, J., G. Mende and B. Schmidt ..... 212 (1983) 489
- Auger electron and characteristic energy loss spectra for electro-deposited americium-241, Varma, M.N. and J.W. Baum ..... 212 (1983) 493
- Metal doped fluorocarbon polymer films prepared by plasma polymerization using an rf planar magnetron target, Biederman, H. and L. Holland ..... 212 (1983) 497
- Pulse amplitude method for determining the pyroelectric coefficient of pyroelectric materials, Tuzzolino, A.J. ... 212 (1983) 505
- Investigation of radiation induced defect impurity complexes in aluminium alloys by channeling. A critical analysis by computer simulation, Müller, M. .... 213 (1983) 453
- Comparison of the nuclear reactions  $^{18}\text{O}(\text{p}, \alpha)^{15}\text{N}$  and  $^{16}\text{O}(\text{d}, \alpha)^{14}\text{N}$  to study the oxygen effects in Pt silicide formation, Lien, C.-D., L. Wieleński and M.-A. Nicolet ..... 213 (1983) 463
- A PIXE-RBS method for measuring partial sputtering yields of stainless steel, Tomita, M., N. Ikuchi, S. Miyagi and M. Sakisaka ..... 213 (1983) 469
- A simple experimental technique for very small Mössbauer line shifts using resonance detectors, Mandjukov, I.G., B.V. Mandjukova, V.G. Jeleu and N.V. Markova ..... 213 (1983) 477
- Study of Ge–Si solid solution crystals by X-ray topography and neutron diffraction, Kozhukh, M.L., I.N. Belokurova, S.B. Vakhrushev, A.N. Titkov and I.L. Shul'pina ..... 213 (1983) 483
- A multichannel detector system for small-angle neutron scattering investigations, Agamalyan, M.M., G.A. Panev and A.A. Zavedia ..... 213 (1983) 489
- Cross-sections of materials used as neutron monochromators and filters, Freund, A.K. .... 213 (1983) 495
- An activation method to determine the isotopic ratio of  $^6\text{Li}/^7\text{Li}$  in lithium compounds, Asher, J. and M.T. Swinhoe ..... 213 (1983) 503
- On the use of polyethyleneterephthalate as solid state nuclear track detector: kinetics and mechanism of particle track etching, Lück, H.B. .... 213 (1983) 507
- Study of  $^{16}\text{O}$  ion tracks in cellulose nitrate plastic detectors, Farid, S.M. and A.P. Sharma ..... 213 (1983) 513
- Hydrogen in carbon foils made by dc glow discharge in ethylene, Bailey, P., D.G. Armour, J.B.A. England, N.R.S. Tait and D.W.L. Tolfree ..... 213 (1983) 517

Some remarks on the statistical correlation of Mössbauer spectra ( <i>Letter to the Editor</i> ), Delunas, A., V. Maxia and S. Serici . . . . .	213 (1983) 563
The mechanism of implanted ion trapping in thick targets investigated by Mössbauer technique ( <i>Letter to the Editor</i> ), Kotlicki, A., J.J. Włodarczyk and A. Wojtasiewicz . . . . .	213 (1983) 565
A wire-chamber spectrometer for muon spin rotation, Tedeschi, R., P. Podini, R. De Renzi, A.P. Jeavons, R. Magnanini and L.O. Norlin . . . . .	214 (1983) 509
A precision beta gauge using a plastic scintillator and photomultiplier detector, Jaklevic, J.M., N.W. Madden and C.E. Wiegand . . . . .	214 (1983) 517
Effect of electric field on cellulose nitrate track detector, Chakarvarti, S.K. and K.K. Nagpaul . . . . .	214 (1983) 519
Self-absorption effect for low energy X-rays ( <i>Letter to the Editor</i> ), Sarkar, M. . . . .	214 (1983) 557
Matrix effects in PIXE evaluation of the major components in thick homogeneous samples, Van Oystaeyen, B. and G. Demortier . . . . .	215 (1983) 299
Phosphate glass detectors, Yadav, J.S. . . . .	215 (1983) 315
Bent perfect Si crystals as neutron reflectors, Rekveldt, M.Th. . . . .	215 (1983) 521
Density measurements for thick-film laser targets, Veesser, L.R., C.J. Maggiore and G.A. Reeves . . . . .	215 (1983) 529
Study of heavy ion tracks in soda glass, Kumar, S., J.S. Yadav, S. Chander and A.P. Sharma . . . . .	215 (1983) 535
An optimised thin film wavelength shifting coating for Cherenkov detection, Grande, M. and G.R. Moss . . . . .	215 (1983) 539
Conversion electron Mössbauer spectroscopy of $^{197}\text{Au}$ ( <i>Letter to the Editor</i> ), Sawicki, J.A., T. Tyliczszak, J. Stanek, B.D. Sawicka and J. Kowalski . . . . .	215 (1983) 567
Method for quantitative PIXE analysis of powdered pottery samples bound in an organic matrix, Lessard, L. and A.J. Houdayer . . . . .	216 (1983) 241
Local density change of a metal backing due to implanted ions: effect on nuclear lifetimes obtained with the DSA method, Keinonen, J., A. Luukkainen, A. Anttila and M. Erola . . . . .	216 (1983) 249
Contacts on chemically etched CdTe $\gamma$ -ray detectors, Musa, A. and J.P. Ponpon . . . . .	216 (1983) 259
A new antireflection treatment for optical surfaces by the nuclear track technique, Fischer, B.E. . . . .	216 (1983) 265
On the use of focusing for small-angle scattering experiments, Freund, A.K. . . . .	216 (1983) 269
Channeltron detecting system for conversion electron Mössbauer spectroscopy at high temperatures ( <i>Letter to the Editor</i> ) Kowalski, J., J. Stanek, T. Tyliczszak and J.A. Sawicki . . . . .	216 (1983) 299
Thermal treatment of Si(SB) detectors ( <i>Letter to Editor</i> ) Głowacka, L., M. Jaskóła, R. Sochacka, M. Wieluński and J. Dalmas . . . . .	216 (1983) 303
Dependence of X-ray yields on different parameters for light element matrices in thick target PIXE and use of standards for calibration in such analysis, Khaliqzaman, M., S.T. Lam, D.M. Sheppard and L.G. Stephens-Newsham . . . . .	216 (1983) 481
Specimen surface effects in thick-target PIXE analysis, Cookson, J.A. and J.L. Campbell . . . . .	216 (1983) 489
Radioactive implant induced X-ray emission: Part II, Sanni, A.O., J.R. Joyce and E.A. Schweikert . . . . .	216 (1983) 497
Resonant emission of secondary electrons associated with recoilless nuclear absorption of gamma rays in solids, Sawicki, J.A. and T. Tyliczszak . . . . .	216 (1983) 501
A proportional electron counter for Mössbauer gamma-ray- and X-ray-crystal interaction studies under diffraction conditions, Chumakov, A.I., A.B. Dubrovin and G.V. Smirnov . . . . .	216 (1983) 505
Measurements and calculation of low-energy heavy ion profiles in silicon, Kisielewicz, M. . . . .	216 (1983) 511
A fluidwalled neutron bottle ( <i>Letter to the Editor</i> ) Bates, J.C. . . . .	216 (1983) 535
The bias in on-line thickness calibration by radiation transmission, Oyedele, J.A. . . . .	217 (1983) 507
Measurement of the low energy tail spectra adjacent to the X-ray photopeak in Si(Li) X-ray detectors, Shima, K., S. Nagai, T. Mikumo and S. Yasumi . . . . .	217 (1983) 515

*Proceedings of the 6th International Conference on Ion Beam Analysis*  
*Tempe, Arizona, May 23–27, 1983*

**Section I. Accelerator-based techniques and equipment**

Time of flight spectrometry in heavy ion backscattering analysis, Chevarier, A. and N. Chevarier . . . . .	218 (1983) 1
A new concept for improved ion and electron lenses – aberration corrected systems of planar electrostatic deflection elements, Dalglish, R.L., T. Winchester and A.M. Smith . . . . .	218 (1983) 7
Time-of-flight system for profiling recoiled light elements, Groleau, R., S.C. Gujrathi and J.P. Martin . . . . .	218 (1983) 11
A simple automatic deadtime loss correction system for particle counting processes induced by ion beams with fluctuating intensities, Amsel, G. and E. Girard . . . . .	218 (1983) 16
Positron analysis as a quantitative technique in ion beam analysis, Sellschop, J.P.F., C.C.P. Madiba, H.J. Annegarn and A.H. Andeweg . . . . .	218 (1983) 23
Non-vacuum Rutherford backscattering spectrometry, Doyle, B.L. . . . .	218 (1983) 29
Sensitivity amplification by sample preconcentration in ion beam analysis, Annegarn, H.J., C.S. Erasmus, J.P.F. Sellschop and M. Tredoux . . . . .	218 (1983) 33



Scanning MeV-ion microprobe for light and heavy ions, Lefevre, H.W., R.C. Connolly, G. Sieger and J.C. Overley .....	218 (1983) 39
Energy-loss radiography with a scanning MeV-ion microprobe, Overley, J.C., R.C. Connolly, G.E. Sieger, J.D. MacDonald and H.W. Lefevre .....	218 (1983) 43
Neutron depth profiling at the National Bureau of Standards, Downing, R.G., R.F. Fleming, J.K. Langland and D.H. Vincent .....	218 (1983) 47
Depth profiles and microtopology, Bird, J.R., P. Duerden, D.D. Cohen, G.B. Smith and P. Hillery .....	218 (1983) 53

## Section II. Rutherford backscattering and channeling analysis

Axial channeling studies of strained-layer superlattices, Picraux, S.T., L.R. Dawson, G.C. Osbourn and W.K. Chu .....	218 (1983) 57
Rutherford backscattering and channeling analysis of epitaxial, low-mass films on high-mass substrates, Golecki, I. ....	218 (1983) 63
Interactive computer analysis of nuclear backscattering spectra, Saunders, P.A. and J.F. Ziegler .....	218 (1983) 67
Determination of the displacement field of hydrogen (deuterium) in tantalum by fast ion channeling, Müller, R. and H.D. Carstanjen .....	218 (1983) 75
Planar dechanneling studies of strained-layer superlattice structures, Chu, W.K., J.A. Ellison, S.T. Picraux, R.M. Biefeld and G.C. Osbourn .....	218 (1983) 81
Characterisation of a new batch of ion implanted Bi in silicon specimens for use as primary reference surface standards, Mitchell, I.V., H.L. Eschbach, L. Avaldi and W. Dobma .....	218 (1983) 91
A modified continuum for the evaluation of channeling experiments for foreign atom location, Beck, K., K. Kopitzki, G. Krauss and G. Mertler .....	218 (1983) 97
Ion beam dosimetry by Rutherford backscattering with continuous rotation of the sample, Hemment, P.L.F., E.A. Maydell-Ondrusz and K.G. Stephens .....	218 (1983) 103
Optimization and application of glancing angle Rutherford backscattering spectrometry, Tamminga, Y., M.F.C. Willemsen and R. Van Silfhout .....	218 (1983) 107

## Section III. Elastic recoil detection

Quantitative analysis of light elements in a heavy material by high energy ion recoil (HEIR) spectrometry, Moreau, C., E.J. Knystautas, R.S. Timsit and R. Groleau .....	218 (1983) 111
Elastic recoil detection analysis of light particles ( $^1\text{H}$ – $^{16}\text{O}$ ) using 30 MeV sulphur ions, Nölscher, C., K. Brenner, R. Knauf and W. Schmidt .....	218 (1983) 116
Helium-induced hydrogen recoil analysis of metallurgical applications, Wielunski, L.S., R.E. Benenson and W.A. Lanford .....	218 (1983) 120
High resolution depth profiling of light elements in high atomic mass materials, Thomas, J.P., M. Fallavier, D. Ramdane, N. Chevarier and A. Chevarier .....	218 (1983) 125

## Section IV. Nuclear reaction analysis

An in-beam-line low-level system for nuclear reaction $\gamma$ -rays, Damjantschitsch, H., M. Weiser, G. Heusser, S. Kalbitzer and H. Mannsperger .....	218 (1983) 129
Absolute calibration of $^{14}\text{N}(\text{d}, \alpha)$ and $^{14}\text{N}(\text{d}, \text{p})$ reactions for surface adsorption studies, Davies, J.A., T.E. Jackman, H. Plattner and I. Bubb .....	218 (1983) 141
Intercomparison of absolute standards for RBS studies, Cohen, C., J.A. Davies, A.V. Drigo and T.E. Jackman ..	218 (1983) 147
Simultaneous high depth resolution profiling of carbon and oxygen, Gossett, C.R. ....	218 (1983) 149
Accelerator energy calibration using nonresonant nuclear reactions, Scott, D.M. and B.M. Paine .....	218 (1983) 154
A new measurement of the 429 keV $^{15}\text{N}(\text{p}, \alpha\gamma)^{12}\text{C}$ resonance. Applications of the very narrow width found to $^{15}\text{N}$ and $^1\text{H}$ depth location. I. Resonance width measurement, Maurel, B. and G. Amsel .....	218 (1983) 159
High resolution depth profiling of F, Ne and Na in materials, Deconninck, G. and B. Van Oystaeyen .....	218 (1983) 165
Nitrogen depth profiling using the $^{14}\text{N}(\text{n}, \text{p})^4\text{C}$ reaction, Fink, D., J.P. Biersack, M. Städele, K. Tjan and V.K. Cheng .....	218 (1983) 171
Precision standard reference targets for microanalysis by nuclear reactions, Amsel, G. and J.A. Davies .....	218 (1983) 177
High resolution techniques for nuclear reaction narrow resonance width measurements and for shallow depth profiling, Amsel, G. and B. Maurel .....	218 (1983) 183

## Section V. MeV microbeam and PIXE

High energy ion microprobes, Nobiling, R. ....	218 (1983) 197
--	----------------

- Intrinsic and effective sensitivities of analysis by X-ray fluorescence induced by protons, electrons, and photons, Grodzins, L. . . . . 218 (1983) 203
- The French AEC nuclear microprobe: description and first application examples, Engelmann, C. and J. Bardy . . . . . 218 (1983) 209
- The use of He microbeams for light element X-ray analysis of biological tissue, Sealock, R.M., A.P. Mazzolini and G.J.F. Legge . . . . . 218 (1983) 217
- BATTY83: a computer program for thick target PIXE analysis, Clayton, E. . . . . 218 (1983) 221

#### Section VI. Low energy ion scattering spectroscopy

- Adsorption study of hydrogen on a stepped Pt (997) surface using low energy recoil scattering, Koeleman, B.J.J., S.T. De Zwart, A.L. Boers, B. Poelsema and L.K. Verhey . . . . . 218 (1983) 225
- Low energy ion scattering for the determination of the locations of surface atoms, Niehus, H. . . . . 218 (1983) 230
- Surface structure analysis from low-energy ion backscattering angular distributions, Williams, R.S. and J.A. Yarmoff . . . . . 218 (1983) 235
- Low-energy ion scattering from the Si(111) surface: analysis of the clean  $7 \times 7$  and Te-stabilized " $1 \times 1$ " structures, Aono, M., R. Souda, C. Oshima and U. Ishizawa . . . . . 218 (1983) 241
- Low energy ion scattering study of  $\text{MoO}_3\text{-BiPO}_4$  biphasic catalysts, Bertrand, P., J.-M. Beuken and M. Delvaux . . . . . 218 (1983) 249
- Low energy ion scattering study of palladium films on silicon (111)- $7 \times 7$  surfaces, Oura, K., Y. Yabuuchi, F. Shoji, T. Hanawa and S. Okada . . . . . 218 (1983) 253
- Quantitative analysis of first and second surface layers by LEIS (TOF), Buck, T.M., G.H. Wheatley and D.P. Jackson . . . . . 218 (1983) 257

#### Section VII. Secondary ion mass spectrometry

- Biomolecule mass spectrometry by fast heavy ion induced desorption, Sundqvist, B. . . . . 218 (1983) 267
- Secondary ion mass spectrometry: high-mass molecular and cluster ions, Colton, R.J. . . . . 218 (1983) 276
- Detection of sputtered neutrals by multi-photon resonance ionization, Kimock, F.M., J.P. Baxter and N. Winograd . . . . . 218 (1983) 287
- Energy and mass analysis of secondary ions sputtered from metallic targets by MeV heavy ions, O'Connor, J.P., P.G. Blauner and R.A. Weller . . . . . 218 (1983) 293
- Quantitative SIMS analysis of hydrogenated amorphous silicon using superimposed deuterium implant standards, Williams, P., K.M. Stika, J.A. Davies and T.E. Jackman . . . . . 218 (1983) 299
- Evaluation of a liquid metal ion source for secondary ion mass spectrometry, Gnaser, H. and F.G. Rüdenauer . . . . . 218 (1983) 303
- The effect of the angle of incidence on secondary ion yields of oxygen-bombarded solids, Wittmaack, K. . . . . 218 (1983) 307
- Oxygen-concentration dependent enhancement of positive secondary ion emission from silicon, Gnaser, H. . . . . 218 (1983) 312
- Instrumental cross-contamination in the Cameca IMS-3F secondary ion microscope, Deline, V.R. . . . . 218 (1983) 316
- The velocity dependence of secondary ion yields, Vasile, M.J. . . . . 218 (1983) 319
- Use of ISS and doubly charged secondary ions to monitor surface composition during SIMS analysis, Reed, D.A. and J.E. Baker . . . . . 218 (1983) 324
- Background formation in SIMS analysis of hydrogen, carbon, nitrogen and oxygen in silicon, Wittmaack, K. . . . . 218 (1983) 327
- Ion neutralisation in secondary ion mass spectrometry, Garret, R.F., R.J. MacDonald and D.J. O'Connor . . . . . 218 (1983) 333
- Ionization of atoms sputtered from  $\text{A}^{\text{III}}\text{V}^{\text{V}}$  compounds, Šroubek, Z. . . . . 218 (1983) 336
- The effects of oxygen adsorption on Cu-Ni alloys during irradiation studied by SIMS, SIPS and ISS, Loxton, C.M., I.S.T. Tsong and H.W. Pickering . . . . . 218 (1983) 340

#### Section VIII. Sub-micron ion beams and applications

- Liquid metal ion sources: mechanism and applications, Swanson, L.W. . . . . 218 (1983) 347
- Applications of focused ion beams, Wagner, A. . . . . 218 (1983) 355
- Mass-separated microbeam system with a liquid-metal-ion source, Ishitani, T., K. Umemura and H. Tamura . . . . . 218 (1983) 363
- Secondary ion imaging in the scanning ion microscope, Levi-Setti, R., P.H. La Marche, K. Lam, T.H. Shields and Y.-L. Wang . . . . . 218 (1983) 368
- SIMS micro-analysis with a gallium ion microprobe, Bayly, A.R., A.R. Waugh and K. Anderson . . . . . 218 (1983) 375
- Time-of-flight atom-probe field ion microscope analysis of thin films: surface segregation of alloys and early stages of silicide formation, Tsong, T.T. . . . . 218 (1983) 383

#### Section IX. Comparison of techniques

- Techniques for the compositional and chemical state analysis of surfaces and thin films, Reuter, W. . . . . 218 (1983) 391
- A comparison of secondary ion mass spectrometry and Auger electron spectroscopy as surface analytical techniques, Morgan, A.E. . . . . 218 (1983) 401

- Quantification of hydrogen in solids by two methods of ion beam analysis, Madiba, C.C.P., J.P.F. Sellschop, H.J. Annegarn and B.R. Appleton ..... 218 (1983) 409
- PIXE analysis of compound materials, Kalish, R. and G. Bahir ..... 218 (1983) 415
- Applications of simultaneous ion backscattering and ion-induced X-ray emission, Musket, R.G. .... 218 (1983) 420
- Section X. Application of ion beam analysis in materials science, geoscience, archaeology and biology**
- The use of accelerators for archaeological dating, Donahue, D.J., A.J.T. Jull, T.H. Zabel and P.E. Damon ..... 218 (1983) 425
- Accelerator mass spectrometry with  $^{26}\text{Al}$ , Middleton, R., J. Klein, G.M. Raisbeck and F. Yiou ..... 218 (1983) 430
- The  $^{12}\text{C}(\alpha, \alpha)^{12}\text{C}$  nuclear resonance at 4.26 MeV and its application in RBS analysis of carbon content in thin films, Östling, M., C.S. Petersson and G. Possnert ..... 218 (1983) 439
- Catalyst metal-support interactions: Rutherford backscattering spectrometry applied to discontinuous films, Baglin, J.E.E., G.J. Clark and J.F. Ziegler ..... 218 (1983) 445
- A Rutherford backscattering study of diffusion in polymers, Selen, M.A. and J.R. MacDonald ..... 218 (1983) 451
- Li, B and N in ancient materials, Fink, D. .... 218 (1983) 456
- Accelerator based mass spectrometry of semiconductor materials, Anthony, J.M. and J. Thomas ..... 218 (1983) 463
- Wear traces and patination on Danish flint artefacts, Andersen, H.H. and H.J. Whitlow ..... 218 (1983) 468
- Surface structural determination of  $\text{UO}_2(111)$  using MeV ions, Thompson, K.A., W.P. Ellis, T.N. Taylor, S.M. Valone and C.J. Maggiore ..... 218 (1983) 475
- Determination of the fluorine distribution in porous silicon using nuclear reaction, XPS and Auger analyses, Earwaker, L.G., J.P.G. Farr, I. Alexander, I.M. Sturland and J.M. Keen ..... 218 (1983) 481
- Metal deposition for microelectronic applications studied by RBS technique, Eskildsen, S.S. and G. Sørensen .. 218 (1983) 485
- Application of the Bragg-profiling technique to the analysis of metallurgical and optical surface layers, Eichinger, P., L. Qiong and R. Leuteneker ..... 218 (1983) 489
- Use of ion beam techniques for studying the leaching properties of lead implanted silicates, Della Mea, G., J.-C. Dran, J.-C. Petit, G. Bezzon and C. Rossi-Alvarez ..... 218 (1983) 493
- Defect trapping of hydrogen in iron studied by the  $^1\text{H}(^{15}\text{N}, \alpha\gamma)^{12}\text{C}$  reaction, Frech, G., G.K. Wolf, H. Damjantschitsch, M. Weiser and S. Kalbitzer ..... 218 (1983) 500
- The determination of the oxygen self-diffusion and gas-solid exchange coefficients for stabilized zirconia by SIMS, Tannhauser, D.S., J.A. Kilner and B.C.H. Steele ..... 218 (1983) 504
- Target preparation for radiocarbon dating by tandem accelerator mass spectrometry, Jull, A.J.T., D.J. Donahue and T.H. Zabel ..... 218 (1983) 509
- Application of RBS and PIXE in specific site determination of S and Si in ion implanted GaAs, Bhattacharya, R.S. and P.P. Pronko ..... 218 (1983) 515
- Elemental analysis of algae with PIXE and PIGME, MacArthur, J.D., G.R. Palmer, W.E. Hekman and K. Budd ..... 218 (1983) 519
- The PIGME method for fluorine determination, Bird, J.R. and E. Clayton ..... 218 (1983) 525
- Lateral variation measurement of helium concentration in implanted Al foils using a proton microbeam, Bodart, F. and S.E. Donnelly ..... 218 (1983) 529
- An experimental study of the surface chemistry and evaporation kinetics of liquid sodium, Becker, C.H. .... 218 (1983) 533
- A study of impurity mobility in ion-implanted Al by Rutherford backscattering, Madakson, P.B. .... 218 (1983) 537
- Ion channeling and TEM studies of pulse melted Fe(Pd) alloys, Knapp, J.A. and D.M. Follstaedt ..... 218 (1983) 542
- High precision SIMS measurements of dopant concentration in III–V semiconductors, Miller, J.N. .... 218 (1983) 547
- Ion beam detection of the austenitic–martensitic phase transformation of single crystal stainless steel, Benzenbacher, F., B.B. Nielsen and J.L. Whitton ..... 218 (1983) 551
- The analysis for light elements of hard gold electrodeposits, Bentley, A.J., L.G. Earwaker, J.P.G. Farr, J. Pountney and M. Saremi ..... 218 (1983) 555
- Oxygen and hydrogen on the surface of diamond, Derry, T.E., C.C.P. Madiba and J.P.F. Sellschop ..... 218 (1983) 559
- Ion sputtered deposit analysis by electron microscopy, Lundquist, T.R., B. Kraus and P.R. Swann ..... 218 (1983) 563
- Rutherford backscattering analysis of silicide formation in Mo–Si structures by ion implantation, Inada, T., K. Kishi, S. Miyagi and H. Kakinuma ..... 218 (1983) 567
- SIMS analysis of silicon on insulator structures formed by high-dose  $\text{O}^+$  implantation into silicon, Kilner, J.A., S.D. Littlewood, P.L.F. Hemment, E. Maydell-Ondrusz and K.G. Stephens ..... 218 (1983) 573
- Ion beam analysis techniques and characterization of amorphous hydrogenated GaAs, Thomas, J.P., M. Fallavier, H. Carchano and L. Alimoussa ..... 218 (1983) 579
- Rutherford backscattering analysis of multilayered Cr–Ni structures to be used for sputtering standards, Simons, D.G., M.D. Brown, J. Fine, T.D. Andeadis and B. Navinšek ..... 218 (1983) 585
- Channeling analysis of thermally nitrified silicon, Amano, J. and T. Ekstedt ..... 218 (1983) 589
- Ion beam analysis of powdered samples, Sellschop, J.P.F., J.F. Prins, U. Von Wimmersperg, M. Tredoux and M. Rebak ..... 218 (1983) 593
- Analysis of hydrogen in corrosion product films on amorphous alloy using the elastic recoil detection technique, Yamaguchi, S., Y. Fujino, S. Nagata, H. Kaneko, K. Hashimoto and M. Hirabayashi ..... 218 (1983) 598



- Depth profiling of hydrogen in thin films with the elastic recoil detection technique, Cheng, H.-S., Z.-Y. Zhou, F.-C. Yang, Z.-W. Xu and Y.-H. Ren ..... 218 (1983) 601
- MeV backscattering analysis of annealing behaviors of ion-implanted arsenic in silicon, Inada, T., H. Miyakawa, T. Ohfuji, K. Benzaki, H. Onoda, Y. Yuge and S. Ushio ..... 218 (1983) 607
- Section XI. Ion beam analysis of defects**
- Ion beam analysis of defect trapping, Swanson, M.L. and L.M. Howe ..... 218 (1983) 613
- Investigation of soft upsets in integrated circuit memories and charge collection in semiconductor test structures by the use of an ion microbeam, Knudson, A.R. and A.B. Campbell ..... 218 (1983) 625
- Probing of lattice defects by radioactive atoms, Wichert, Th., M. Deicher, G. Lindner, H. Hofsäss and E. Recknagel ..... 218 (1983) 633
- Dechanneling analysis of disorder in (100) gallium arsenide, Rossiter, K.G., R.G. Elliman, I.V. Mitchell, A.P. Pogany and J.S. Williams ..... 218 (1983) 639
- Interstitial trapping in Fe-implanted Al after excimer laser annealing, Swanson, M.L., L.M. Howe, A.F. Quenneville and J.A. Nilson ..... 218 (1983) 643
- Application of the channeling and X-ray diffraction techniques for defect analysis, Kaufmann, R., G. Linker and O. Meyer ..... 218 (1983) 647
- Investigation of damage produced by self-implantation of tellurium, Wu, M.F., D. Schroyen, H. Pattyn and G. Langouche ..... 218 (1983) 652
- Radiation damage in InSb single crystal by  $\alpha$ -particle bombardment, Friedland, E., B.J.E. Van Tonder and J.F. Prins ..... 218 (1983) 658
- The creation and annihilation of vacancy-solute complexes during irradiation of Ni(In) and Ni(Au) crystals, Howe, L.M., M.L. Swanson and A.F. Quenneville ..... 218 (1983) 663
- Ion channeling study of radiation induced defects in a bent silicon crystal, Wang, G.H., P.J. Cong, W.M. Gibson, C.R. Sun, I.J. Kim, S. Salman, M. Pisharody, S.I. Baker, R.A. Carrigan, Jr., J.S. Forster and I.V. Mitchell ..... 218 (1983) 669
- Section XII. Atomic mixing and materials modification by ion beams**
- Some properties of the relocation function in ion beam collisional mixing, Roosendaal, H.E. and J.B. Sanders .. 218 (1983) 673
- Surface modification using MeV ion beams, Tombrello, T.A. .... 218 (1983) 679
- Low-temperature ion-beam mixing of platinum markers in iron, Böttiger, J., S.K. Nielsen, H.J. Whitlow and P. Wriedt ..... 218 (1983) 684
- The influence of atomic mixing on SIMS depth profiling of thin buried layers, King, B.V. and I.S.T. Tsong .... 218 (1983) 687
- A study of mixing behavior of Al–Ag, Al–In and Al–Sn systems by Ar ion irradiation, Fujino, Y., S. Yamaguchi, H. Naramoto and K. Ozawa ..... 218 (1983) 691
- Bombardment induced cascade mixing and the importance of post-cascade relaxation, Webb, R.P. and D.E. Harrison, Jr. .... 218 (1983) 697
- In situ Rutherford backscattering measurements of ion-beam-induced atomic mixing, Jorch, H.H. and R.D. Werner ..... 218 (1983) 703
- Ion-induced chemistry in condensed gas solids, Boring, J.W., R.E. Johnson, C.T. Reimann, J.W. Garrett, W.L. Brown and K.J. Marcantonio ..... 218 (1983) 707
- Section XIII. Sputtering and desorption phenomena**
- Ion desorption spectrometry: a new method of surface investigation, Schneider, P.J., W. Eckstein and H. Verbeek ..... 218 (1983) 713
- Surface analysis using scattered primary and recoiled secondary neutrals and ions by TOF and ESA techniques, Rabalais, J.W., J.A. Schultz and R. Kumar ..... 218 (1983) 719
- The creation of surface damage by ion-beam bombardment, Harrison, Jr., D.E. and R.P. Webb ..... 218 (1983) 727
- Self sputtering on cobalt single crystals, Johansen, A., E. Johnson, L. Sarholt-Kristensen and S.M. Abdali .... 218 (1983) 737
- Kinetic energy distributions of sputtered particles in non-cascade sputtering processes, Ziv, A.R., B.V. King, S.H. Lin and I.S.T. Tsong ..... 218 (1983) 742
- Shape of the target region affected by the cascade recoils, Andreadis, T.D., M.L. Roush, F. Davarya, G.P. Chambers, O.F. Goktepe and J. Fine ..... 218 (1983) 747
- Angular distributions and differential sputtering yields of binary compounds as a function of angle of incidence, Roth, J., J. Bohdansky and W. Eckstein ..... 218 (1983) 751

**Section XIV. Inelastic and electronic effects in ion–solid interactions**

Auger electron emission from solids during bombardment with MeV ions, Saemann-Ischenko, G. and W. Schmidt .....	218 (1983) 757
Auger electron emission induced by MeV $H^+$ and $He^+$ ions, MacDonald, J.R., L.C. Feldman, P.J. Silverman, J.A. Davies, K. Griffiths, T.E. Jackman, P.R. Norton and W.N. Unertl .....	218 (1983) 765
Electronic excitation of Ti atoms sputtered by energetic $Ar^+$ and $He^+$ from clean and monolayer oxygen covered surfaces, Pellin, M.J., D.M. Gruen, C.E. Young and M.D. Wiggins .....	218 (1983) 771
Multiple-collision analysis of characteristic X-rays from low-energy $Ar^{2+}$ traveling in solid targets, Cipolla, S.J. and M.E. Mildebrath .....	218 (1983) 777
Ion–electron emission from magnetostriuctive alloy, Soszka, M. and W. Soszka .....	218 (1983) 782

**Section XV. Energy loss, straggling, range and cross-section**

Ranges of some 20–100 keV light ions in Si and Ge, Paltemaa, R., J. Räisänen, M. Hautala and A. Anttila .....	218 (1983) 785
Protons energies at the maximum of the electronic stopping cross section in materials with $57 \leq Z_2 \leq 83$ , Krist, Th. and P. Mertens .....	218 (1983) 790
L subshell ionization cross section for light ion bombardment of high $Z$ targets, Cohen, D.D. ....	218 (1983) 795
Computer simulations of slowing down of ions in polycrystalline materials, Hautala, M. ....	218 (1983) 799
Heavy ion energy straggling, Anthony, J.M. ....	218 (1983) 803
Search for an influence of the measuring method on stopping cross section data near the maximum, Semrad, D., P. Bauer, F. Aumayr, P. Huber and W. Obermann .....	218 (1983) 811
$Z_2$ stopping power oscillations as derived from range measurements, Fink, D., J.P. Biersack, M. Städele, K. Tjan and V.K. Cheng .....	218 (1983) 817
Stopping ratios for 30–330 keV light ions in materials with $57 \leq Z_2 \leq 83$ , Krist, Th. and P. Mertens .....	218 (1983) 821

**Atomic and Molecular Beam Studies**

Helium-induced L-shell ionization cross sections, Mukoyama, T. and L. Sarkadi .....	211 (1983) 525
Reactive sputtering of simple condensed gases by keV heavy ion bombardment, Haring, R.A., A. Haring, F.S. Klein, A.C. Kummel and A.E. De Vries .....	211 (1983) 529
New measurements of equilibrium charge state distributions of fast medium heavy ions in mylar, Louvel, M., G. Bizard, A. Drouet, J. Jabbour, J.L. Laville, R. Regimbart, C. Stephan and L. Tassan-Got .....	211 (1983) 535
Studies of the center potential in a Penning discharge, Rohwer, P., H. Baumann, W. Schütze and K. Bethge .....	211 (1983) 543
Ranges, reflection and secondary electron emission for keV hydrogen ions incident on solid $N_2$ , Børgesen, P., H. Sørensen and Chen Hao-Ming .....	212 (1983) 517
Accuracy of stopping cross section determination from RBS-spectra by Wartens' method, Aumayr, F., P. Bauer and D. Semrad .....	212 (1983) 520
Mass spectrometric study of the negatively-charged krypton and xenon monofluorides, Minehara, E. and S. Abe	212 (1983) 533
A method of studying atomic screening effects in pair production, Bose, J., N. Bhattacharjee, S.K. Sengupta and N. Chaudhuri .....	212 (1983) 539
The response of an isobutane filled ion chamber to heavy ions, James, A.N., P.A. Butler, T.P. Morrison, J. Simpson and K.A. Connell .....	212 (1983) 545
Multiple scattering of protons and deuterons by thick foils, Dixon, D.R., G.L. Jensen, S.M. Morrill, R.L. Walter and C.R. Gould .....	213 (1983) 525
Energy loss measurements for charged particles and a new approach based on the experimental results, Iga, Y., T. Wada, Y. Yamashita and I. Yamamoto .....	213 (1983) 531
Collision experiment on highly ionized ions using a vacuum spark source, Takagi, S., S. Ohtani, K. Kadota and J. Fujita .....	213 (1983) 539

***Proceedings of the International Workshop on Cross Sections for Fusion and Other Applications  
Texas A&M University, College Station, TX, USA, November 4–6, 1982***

Status of the U.S. effort in atomic physics research relevant to the magnetically confined fusion program, Barnett, C.F. ....	214 (1983) 1
Near-thermal multi-charged ion interactions with hydrogen, Church, D.A. ....	214 (1983) 9
Reference cross sections for K-shell ionization by light ions, Paul, H. and W. Obermann .....	214 (1983) 15
Accurate calculation of inner-shell ionization, Trautmann, D., F. Rösels and G. Bauer .....	214 (1983) 21
The binding effect in alpha- and deuteron-induced L-shell X-ray production in the $Z = 32$ –47 region, Jesus, A.P., I.R. Pimentel and J.S. Lopes .....	214 (1983) 29

Optimized basis states for inner-shell ionization, Land, D.J., D.G. Simons and M.D. Brown . . . . .	214 (1983) 35
L-shell Coulomb ionization, Sarkadi, L. . . . .	214 (1983) 43
Theory of L-shell ion-impact ionization: inclusive cross sections and multiple-vacancy (K-satellite) distributions, Becker, R.L., A.L. Ford and J.F. Reading . . . . .	214 (1983) 49
Direct ionization and capture in inner-shell processes, McDaniel, F.D. . . . .	214 (1983) 57
Probabilities for K-shell ionization and capture by light ions: scaling properties, Horsdal-Pedersen, E. . . . .	214 (1983) 65
Measurements of charge change in atomic collisions at MeV energies, Johnson, B.M. . . . .	214 (1983) 73
Additivity failure in charge transfer from molecules to bound and continuum states of $\sim$ MeV/u $H^+$ , $He^{+,2+}$ projectiles, Bissinger, G. . . . .	214 (1983) 81
Screening effects for excitation probabilities in ion-atom collisions, McAbee, T.L. . . . .	214 (1983) 89
A simple classical model for the impact parameter dependence of electron capture, Brandt, D. . . . .	214 (1983) 93
Treatment of long-range couplings in collisional charge transfer from H(1s) to fully-stripped ions, Thorson, W.R. . . . .	214 (1983) 97
Angular scattering in ion-atom collisions at intermediate energies, Olson, R.E. . . . .	214 (1983) 103
Collisions involving hydrogen atoms, Gilbody, H.B. . . . .	214 (1983) 109
Spectra of $np$ – $1s$ transitions excited during the passage of 48 MeV Mg ions through thin and thick carbon targets, Maurer, R.J., R.L. Watson and G.J. Pedrazzini . . . . .	214 (1983) 117
Ion induced electron ejection from solids, Frischkorn, H.J., K.O. Groeneveld, D. Hofmann, P. Koschar, R. Latz and J. Schader . . . . .	214 (1983) 123
Electron-ion collisions of fusion interest, Crandall, D.H. . . . .	214 (1983) 129

Fano factors of krypton-xenon mixtures ( <i>Letter to the Editor</i> ), Ribeirete, M.M.F., A.J.P.L. Policarpo, M. Saletc S.C.P. Leite, M.A.F. Alves and E.P. De Lima . . . . .	214 (1983) 561
Special gas mixtures with very small drift angles at low drift velocities, Becker, U., M. Capell, M. Chen, M. White, C.H. Ye, K. Yee, J. Fehlmann and P.G. Seiler . . . . .	214 (1983) 525
$^4He$ stopping cross sections in $H_2$ , He, $N_2$ , $O_2$ , Ne, Ar, Kr, Xe, $CH_4$ and $CO_2$ , Baumgart, H., H. Berg, E. Huttel, E. Pfaff, G. Reiter and G. Clausnitzer . . . . .	215 (1983) 319
Energy loss straggling of 1.4–10 MeV/u heavy ions in gases, Geissel, H., Y. Laichter, W.F.W. Schneider and P. Armbruster . . . . .	215 (1983) 329
Developments regarding the Bragg rule for stopping power and critical examination of its application to water, Kamaratos, E. . . . .	215 (1983) 337
Recombination luminescence from ionization tracks produced by alpha particles in high pressure argon, krypton and xenon gases, Suzuki, M. . . . .	215 (1983) 345
Energy calibration at several hundred keV by time-of-flight and by comparing protons with $H_2^+$ ions, Semrad, D., M. Geretschlager and A. Rabler . . . . .	215 (1983) 549
The energy straggling of protons in thin carbon foils, Notermans, G.H.J., R.G. Smeenk and J.F.M. Westendorp . . . . .	215 (1983) 555
Axial dechanneling. I. Perfect crystal, Gärtner, K., K. Hehl and G. Schlotzhauer . . . . .	216 (1983) 275
The gas-solid density effect for MeV/u ions: charge changing cross sections and the effective charge, Cowern, N.E.B., C.J. Woods and C.J. Sofield . . . . .	216 (1983) 287
Energy-loss and straggling of hydrogen and helium ions in silver, Lombaard, J., J. Conradie and E. Friedland . . . . .	216 (1983) 293
Enhanced yields of different charge states of nitrogen ions backscattered at $180^\circ$ , Mingay, D.W. and B. Rosner . . . . .	216 (1983) 517
Evaluation of RF transition efficiency in an atomic-beam polarized deuteron source, Hasuyama, H., Y. Kanda and Y. Wakuta . . . . .	216 (1983) 525

## Special Applications

Application of novel techniques of medical imaging to the non-destructive analysis of carbon-carbon composite materials, More, N., B. Basse-Cathalinat, C. Baquey, F. Lacroix and D. Ducassou . . . . .	214 (1983) 531
In situ capture gamma-ray analysis of coal in an oversize borehole, Mikesell, J.L., D.W. Dotson, F.E. Senftle, R.S. Zych, J. Koger and L. Goldman . . . . .	215 (1983) 561
Inter-pulse high-resolution gamma-ray spectra using a 14 MeV pulsed neutron generator, Evans, L.G., J.I. Trombka, D.H. Jensen, W.A. Stephenson, R.A. Hoover, J.L. Mikesell, A.B. Tanner and F.E. Senftle . . . . .	219 (1984) 233

## Letters to the Editor

High speed rotating vacuum seal, Garibaldi, J.L. and C.M. Logan . . . . .	211 (1983) 213
Ligne de transfert achromatique à longueur équivalente fortement négative, Roussel, P. et J.M. De Coster . . . . .	211 (1983) 215
A modulator power supply for electrochemical etching, Uytenhove, J. and C. Van den Bossche . . . . .	211 (1983) 219
A non-iterative method for fitting circular arcs to measured points, Crawford, J.F. . . . .	211 (1983) 223



- A computer program for nuclear reaction analysis with the  $D(^3\text{He}, \alpha)\text{H}$  reaction, Marcuso, T.L.M., S.J. Rothman, L.J. Nowicki and P. Baldo ..... 211 (1983) 227
- Further improvements in Mössbauer spectroscopy with lead loaded plastic scintillators, Bressani, T., P. Macciotta, C. Muntoni and S. Serci ..... 211 (1983) 231
- Mass stopping powers of protons up to 200 MeV in some biologically important materials, Mukherjee, B. .... 211 (1983) 235
- Anomalous current in a parallel plate secondary electron monitor, Ohkuma, J. and M. Kawanishi ..... 211 (1983) 547
- A digital pulse-pair detecting circuit, Bell, Z.W., J.W. McConnell and E.D. Carroll ..... 211 (1983) 551
- Effect of Poisson weighting on decay parameters: numerical results as noise level is increased, Kalantar, A.H. ... 211 (1983) 555
- Fast protons in neutron calibration fields, Guldbakke, S. and H. Lesiecki ..... 211 (1983) 559
- A gamma-camera distortion corrector using a programmable on-line microcomputer, Mine, P., L. Hadjeris, T. Huang-Xuan, R. Marbot, F. Soussaline, J. Jeanjean and H. Nguyen Ngoc ..... 211 (1983) 561
- Angular distributions of soft X-rays from the ETL-storage ring, Suzuki, I.H., F. Sugawara and K. Sakihara .... 211 (1983) 565
- The thickness distortion of  $^{57}\text{Fe}$  backscatter Mössbauer spectra, Fultz, B. and J.W. Morris, Jr. .... 211 (1983) 569
- Enhanced intensity of 7.6 MeV gamma rays from an  $^{241}\text{Am}/\text{Be}$  source in a multilayered  $\text{CH}_2\text{--Fe}$  shield, Atwater, H.F. .... 212 (1983) 555
- Some remarks on the spiral orbit spectrometer, Faust, H.R. and F. Blönnigen ..... 213 (1983) 545
- Simple serial data link, Gottschalk, B. .... 213 (1983) 547
- Real time spectrum stabilization by software, Kosina, Z. .... 213 (1983) 551
- A time averaged background compensator for Geiger–Müller counters, Bhattacharya, R.C. and P.K. Ghosh ... 213 (1983) 553
- A fall-focussing gravity spectrometer for very slow neutrons, Utsuro, M. .... 213 (1983) 557
- Optimum sample thickness for total cross section measurements, Sears, V.F. .... 213 (1983) 561
- Some remarks on the statistical correlation of Mössbauer spectra, Delunas, A., V. Maxia and S. Serci ..... 213 (1983) 563
- The mechanism of implanted ion trapping in thick targets investigated by Mössbauer technique, Kotlicki, A., J.J. Włodarczyk and A. Wojtasiewicz ..... 213 (1983) 565
- The application of lineshape analysis in plunger measurements, Winter, G. .... 214 (1983) 537
- The absolute efficiency of a 7.6- by 7.6-cm bismuth germanate scintillator for 15-MeV gamma rays, Roberson, N.R., S.A. Wender and D.M. Drake ..... 214 (1983) 541
- Comments on “Neutron spectral unfolding using the Monte Carlo method”, Chambless, D.A. and J.A. Broadway ..... 214 (1983) 543
- Reply to Chambless and Broadway, O'Brien, K. and R. Sanna ..... 214 (1983) 547
- A note on the interpretation of activation measurements on the Princeton Large Torus, Strachan, J.D. and G. Zankl ..... 214 (1983) 551
- Tunneling afterglow and anomalous fading in dosimetry with  $\text{CaSO}_4:\text{Dy}$ , Visocekas, R., M. Ouchene and B. Gallois ..... 214 (1983) 553
- Self-absorption effect for low energy X-rays, Sarkar, M. .... 214 (1983) 557
- Fano factors of krypton–xenon mixtures, Ribeirete, M.M.F., A.J.P.L. Policarpo, M. Saleté S.C.P. Leite, M.A.F. Alves and E.P. De Lima ..... 214 (1983) 561
- A laser-based TOF monitoring system using a high-speed vacuum photodiode, Fujii, T., Y. Hashimoto, T. Kageyama, K. Nakamura, F. Sai, S. Sakamoto, S. Sato, T. Takahashi, T. Tanimori, Y. Umeda and S.S. Yamamoto ..... 215 (1983) 357
- Conversion electron Mössbauer spectroscopy of  $^{197}\text{Au}$ , Sawicki, J.A., T. Tyliczszak, J. Stanek, B.D. Sawicka and J. Kowalski ..... 215 (1983) 567
- Channeltron detecting system for conversion electron Mössbauer spectroscopy at high temperatures, Kowalski, J., J. Stanek, T. Tyliczszak and J.A. Sawicki ..... 216 (1983) 299
- Thermal treatment of Si(SB) detectors, Głowacka, L., M. Jaskóła, R. Sochacka, M. Wieluński and J. Dalmás ... 216 (1983) 303
- Preamplifiers with pulsed optical feedback as a source of errors in instrumental activation analysis, Bode, P. and M. De Bruin ..... 216 (1983) 529
- Effects of two consecutive non-extended dead times, Faraci, G. and A.R. Pennisi ..... 216 (1983) 531
- A fluid walled neutron bottle, Bates, J.C. .... 216 (1983) 535
- On the 20 K methane moderator and its applicability to an intense pulsed cold neutron source, Inoue, K. .... 216 (1983) 537
- Pulse shaping for fast coincidence with NaI(Tl) detectors, Bose, S., B.K. Sinha and R. Bhattacharya ..... 217 (1983) 521
- A new method for discriminating  $\beta$ - and  $\gamma$ -doses in thick TL-dosimeters, Sahre, P. .... 217 (1983) 525
- A new operating regime for CRYEBIS, Faure, J., B. Feinberg, A. Courtois and R. Gobin ..... 219 (1984) 243
- Improved extraction of zirconium and molybdenum beams from a Penning discharge ion source, Lewis, M.B. ... 219 (1984) 247
- On-line optimisation of the resolution of a magnetic spectrometer, Sanderson, N.E., R.A. Cunningham, J.N. Mo, R. Chapman and J.L. Durell ..... 219 (1984) 250
- Determination of L capture probability from L X-ray-gamma ray summing in a gamma-X detector, Mukherjee, P., C. Samanta and I. Mukherjee ..... 219 (1984) 253
- An inexpensive method to increase the counting rate of a  $^{57}\text{Co}$  Mössbauer spectrometer, Jiménez-Domínguez, H., A. Cabral-Prieto, H. Flores-Llamas, S. Galindo and F.J. Ramírez-Jiménez ..... 219 (1984) 256
- Time and energy measurement with charge integrating ADCs, Venema, W.Z. .... 219 (1984) 257

Prior distributions for Bayesian estimations of positive quantities, Vincent, C.H. . . . .	219 (1984) 259
The measurement of $^{10}\text{Be}$ with an accelerator at 3 MV, Southon, J.R., J.S. Vogel, G. Richards and D.E. Nelson .	219 (1984) 435
A method for the preparation of $^{13}\text{C}$ targets by the cracking procedure, Ramström, E. and B. Trostell . . . . .	219 (1984) 438
Optimum sample thickness for total cross section measurements, Vincent, C.H. . . . .	219 (1984) 440
Random walk approach for neutron diffusion with strong absorption, Cáceres, M.O. and H. Wio . . . . .	219 (1984) 441
Hryniewicz's third relation and its application in the measurements of magnetic moments, Sinha, B.K. and R. Bhattacharyya . . . . .	219 (1984) 443
Suppression of "spill-over" by roughened neutron mirrors, Bates, J.C. . . . .	219 (1984) 445
On ultracold neutron generation in material bottles, Stoica, A.D. and A. Jipa . . . . .	219 (1984) 447
Variation in fwhm of gamma photopeak resolution with sample composition during neutron activation analysis using a low-energy photon spectrometer, Potts, P.J. and T. Twomey . . . . .	219 (1984) 601
Optimization of multilayer soft X-ray mirrors, Bruijn, M.P., J. Verhoeven and M.J. Van der Wiel . . . . .	219 (1984) 603
Proposed new method, simple and durable, for the production of highly polarized electrons, Slobodrian, R.J. . .	220 (1984) 582
Contrast enhancement of fission fragment tracks for automatic counting by image analyzing microscopes, Williams, F.H., J.M. Smith and R.R. Baerwolf . . . . .	220 (1984) 585

## Errata

C.H. Vincent, <i>The estimation of differential counting measurements</i> , Nucl. Instr. and Meth. 203 (1982) 307–315 . .	217 (1983) 527
Faizan Ul Haq, <i>Amplification factor of an EMI 9603B particle multiplier for singly charged alkali ions</i> , Nucl. Instr. and Meth. 203 (1982) 561–563. . . . .	217 (1983) 527
Th. Lindblad, L. Bagge, Å. Engström, J. Bialkowski, C.R. Gruhn, W. Pang, M. Roach and R. Loveman, <i>On the development of liquid ionization detectors as spectroscopic instruments</i> , Nucl. Instr. and Meth. 215 (1983) 183–191 . . . . .	219 (1984) 262

## Book Reviews

Industrial application of radioisotopes and radiation technology (Reviewer: B. Sundqvist) . . . . .	211 (1983) 238
Applied thermoluminescence dosimetry (Reviewer: B. Lindsoug) . . . . .	213 (1983) 569
New books from the International Atomic Energy Agency (Vienna) . . . . .	214 (1983) 565
Neutron sources for basic physics and applications (Reviewer: L. Nilsson) . . . . .	216 (1983) 306



# PHYSICS REPORTS

## A special discount offer for private use only!

Over the years **PHYSICS REPORTS** has built up an international reputation as one of the leading review journals for diverse branches of physics. Physics Reports intends to keep the active physicist up to date on developments in relatively narrow fields, by publishing timely reviews which are more than just literature surveys but normally less than a full monograph. They are specialist in nature but will contain enough material to make the main points intelligible to a non-specialist. The reader will not only be able to distinguish important developments and trends but will also find a sufficient number of references to the original literature.

Every month approximately 6 issues are published and to date more than 730 articles have appeared.

All issues of **PHYSICS REPORTS** are available to **individuals only** at a substantial discount under our Bulk Order Scheme. In this way research workers and graduate students will be in a position to afford their own copy of a particular report. Depending on the issue size, the special prices range from US \$6.00 to US \$18.00.

In order to take advantage of this special offer, you and your colleagues can send your combined orders directly to the publisher, providing the total order amounts to at least US \$75.00. By meeting this requirement, individual postage, handling and invoicing charges can be avoided. If you would like to receive the full listing of all **PHYSICS REPORTS** published to date - the **Physics Reports Bulk Order Scheme** - please send in the form (or a photocopy of it) below.

Please note that you may combine your order with issues of Surface Science Reports, which are available under a similar scheme.

---

## REQUEST FORM

Please complete and return to:

Ms. A. Broekgaarden, NORTH-HOLLAND PHYSICS PUBLISHING,  
P.O. Box 103, 1000 AC Amsterdam, The Netherlands

- ☐ Please send me the Physics Reports Bulk Order Scheme, listing all available Physics Reports.
- ☐ Please send me a copy of the Surface Science Reports Bulk Order Scheme, listing all available Surface Science Reports.

Name \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_



VOLUME I  
HISTORY  
OF CERN

# Volume I

## Launching the European Organization for Nuclear Research

1987 xxii + 600 pages Price: US \$111.00/Dfl.250.00 ISBN 0-444-87037-7

by **Armin Hermann**, *Universität Stuttgart, Stuttgart, F.R.G.*, **John Krige**, *Sussex University, Brighton, U.K.*,  
**Ulrike Mersits**, *University of Vienna, Vienna, Austria*, **Dominique Pestre**, *Centre de Recherches Historiques,  
EHESS-CNRS, Paris, France* and with a contribution by **Lanfranco Belloni**

This book is the first of two volumes on the history of CERN from its inception in the late 40's up to the mid-60's. The authors have divided these 17-18 years into roughly two successive periods. One deals with the birth and official establishment of the organization and thus covers the years 1949-1954, while the other studies the life of the European laboratory during the first twelve years of its existence. This second volume is scheduled for publication at the end of 1988. Volume 1 comprises four main parts and a conclusion.

**Contents:** Preface. Remarks on the notes and bibliographies. List of archival sources consulted. List of abbreviations. **Part I - The Post-War Emergence of High-Energy Physics.** From cosmic-ray and nuclear physics to high-energy physics (*Ulrike Mersits*). **Part II - The Prehistory of CERN, 1949 - February 1952.** The first suggestions, 1949 - June 1950 (*Dominique Pestre*). The fusion of the initiatives, June - December 1950 (*Dominique Pestre*). The period of informed optimism, December 1950 - August 1951 (*Dominique Pestre*). The period of conflict, August - December 1951 (*Dominique Pestre*). The establishment of a Council of Representatives of European States, December 1951 - February 1952 (*Dominique Pestre*). **Part III - The Provisional CERN, February 1952 - October 1954.** Survey of developments (*John Krige*). Case studies of some important decisions (*John Krige*). Collection of photographs and documents of historic interest. **Part IV - National Decisions to Join CERN.** French attitudes to the European Laboratory, 1949 - 1954 (*Dominique Pestre*). The Italian scenario (*Lanfranco Belloni*). Germany's part in the setting-up of CERN (*Armin Hermann*). Britain and the European Laboratory Project: 1951 - mid-1952 (*John Krige*). Britain and the European Laboratory Project: mid-1952 - December 1953 (*John Krige*). **Part V - Concluding Remarks.** The how and the why of the birth of CERN (*John Krige and Dominique Pestre*). Appendices: Who's who in the Foundation of CERN (*Armin Hermann*); Chronology of Events (*John Krige and Dominique Pestre*). Name index. Subject index.

*A descriptive brochure is available on request from the publisher.*



**NORTH-HOLLAND PHYSICS PUBLISHING**

P.O. BOX 103, 1000 AC, AMSTERDAM, THE NETHERLANDS

In the U.S.A. and Canada: Elsevier Science Publishing Co. Inc, 52 Vanderbilt Ave. New York, NY 10017

US \$ prices are valid only in the USA and Canada. In all other countries the Dutch Guilder price is definitive.  
Customers in the Netherlands, please add 6% B.T.W. In New York State applicable sales tax should be added.  
All prices are subject to change without prior notice.

p270NH

# handbook on synchrotron radiation

**General Editors:** D. E. EASTMAN and Y. FARGE

Synchrotron Radiation spans the large gap between the infrared and X-ray range. The availability of coherent radiation of high intensity provides a unique capability which is not available with other sources.

## Volume 1

edited by E.-E. KOCH

**CHARACTERISTICS, INSTRUMENTATION  
AND PRINCIPLES OF RESEARCH  
APPLICATIONS**

Part A

1983 lxvi + 606 p.  
US \$ 164.50/Dfl. 370.00  
ISBN 0-444-86709-0

Part B

1983 lxvi + 560 p.  
US \$ 164.50/Dfl. 370.00  
ISBN 0-444-86710-4  
Set price  
US \$ 280.00/Dfl. 630.00  
ISBN 0-444-86425-3

### A COMMENT FROM THE PRESS:

"This multidisciplinary juxtaposition is well illustrated within the pages of these first two volumes of the *Handbook on Synchrotron Radiation*. Here is excellent material for anyone who wants to find out what is going on in the field of SR. The material is contributed by well known experts in their own field of study and the editors are to be congratulated in persuading these 26 active research workers to devote what must have been a substantial effort to the preparation of the thirteen reviews contained in these volumes."

Journal of Physics E:  
Scientific Instruments

As from Volume 2 the new General Editors will be:

E.-E. KOCH, T. SASAKI and  
H. WINICK

In preparation:

## Volume 2

**VUV and X-Ray Processes**

edited by G. V. MARR

## Volume 3

edited by D. MONCTON and G. BROWN

### FREE ELECTRON LASER CONFERENCES

(Special Issues reprinted from the Journal  
NUCLEAR INSTRUMENTS AND METHODS  
IN PHYSICS RESEARCH - Section A)

### Applications of Free Electron Lasers

(Proc. of the Workshop, Castelgandolfo, Italy,  
10-12 Sept. 1984)

Volume 239, no. 3

edited by D. A. G. DEACON and  
A. DE ANGELIS

1985 xi + 292 pages  
US \$ 109.75/Dfl. 272.00

### Free Electron Lasers

(Proceedings of the Seventh Int. Free Electron  
Laser Conf., Tahoe City, California, USA,  
8-13 Sept. 1985)

Volume 250, nos. 1/2

edited by D. PROSNITZ and  
E. T. SCHARLEMAN

1986 xviii + 490 pages  
US \$ 193.25/Dfl. 479.00

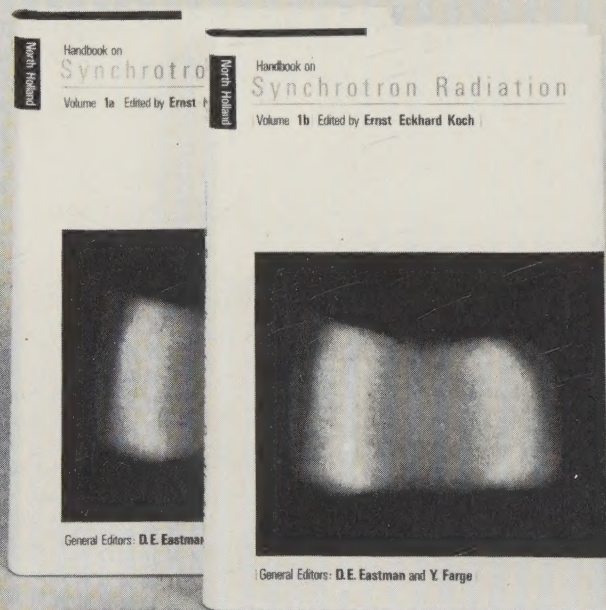
In preparation:

### Free Electron Lasers

(Proceedings of the Eighth International  
Conference on Free Electron Lasers,  
Glasgow, Scotland, 1-5 September 1986)  
edited by M. POOLE and D. PROSNITZ

For more information please contact the  
publisher.

P244NH



## NORTH-HOLLAND PHYSICS PUBLISHING

P.O. BOX 103, 1000 AC Amsterdam, The Netherlands

in the USA and Canada:

ELSEVIER SCIENCE PUBLISHING CO Inc.  
52 Vanderbilt Ave. New York, NY 10017, USA

US \$ prices are valid only in the USA and Canada. In all other countries the Dutch Guilder price is definitive. Customers in the Netherlands, please add 6% B.T.W. In New York State applicable sales tax should be added. All prices are subject to change without prior notice.



# Journals in Physics

## Applied Surface Science

1987: Vol. 27-29 in 9 issues Price: US \$351.00/Dfl. 870.00

## Chemical Physics

1987: Vols. 111-120 in 30 issues Price: US \$1371.00/Dfl. 3400.00

## Chemical Physics Letters

1987: Vols. 134-144 in 66 issues Price: US \$1841.50/Dfl. 4565.00

## Computer Physics Communications

1987: Vols. 45-47 in 9 issues Price: US \$562.50/Dfl. 1395.00

## Computer Physics Reports

1987: Vols. 7 and 8 in 12 issues Price: US \$351.00/Dfl. 870.00

*Reduced Combined Subscription to Computer Physics Communications and Computer Physics Reports for 1987: US \$ 826.50/Dfl. 2050.00*

## Fusion Engineering and Design

(Formerly Nuclear Engineering and Design Fusion)

1987: Vols. 6 and 7 in 8 issues Price: US \$415.00/Sw.Frs. 740.00 (Sw.Frs. price is definitive)

## Journal of Crystal Growth

1987: Vols. 81-85 in 20 issues Price: US \$1280.00/Dfl. 3175.00

## Journal of Luminescence

1987: Vols. 37-39 in 12 issues Price: US \$441.50/Dfl. 1095.00

## Journal of Magnetism and Magnetic Materials

1987: Vols. 61-69 in 27 issues Price: US \$1324.00/Dfl. 3285.00

## Journal of Non-Crystalline Solids

1987: Vols. 87-96 in 30 issues Price: US \$1290.50/Dfl. 3200.00

## Journal of Nuclear Materials

1987: Vols. 147-153 in 21 issues Price: US \$1086.50/Dfl. 2695.00

## Materials Letters

1987: Vol. 6 in 12 issues Price: US \$115.00/Dfl. 285.00

## Materials Science Reports NEW

1987: Vol. 2 in 8 issues Price: US \$110.75/Dfl. 275.00

(Vol. 1 published in 1986, free of charge for subscribers to Vol. 2, during 1987)

## Nuclear Engineering and Design

1987: Vols. 98-104 in 21 issues Price: US \$1412.50/Sw.Frs. 2520.00 (Sw.Frs. price is definitive)

*Reduced Combined Subscription to Nuclear Engineering and Design and Fusion Engineering and Design for 1987: US \$1273.00/Sw.Frs. 2990.00 (Sw.Frs. price is definitive)*

## Nuclear Instruments and Methods in Physics Research - Section A

Accelerators, Spectrometers, Detectors and Associated Equipment

1987: Vols. 254-263 in 30 issues Price: US \$2137.00/Dfl. 5300.00

## Nuclear Instruments and Methods in Physics Research - Section B

Beam Interactions with Materials and Atoms

1987: Vols. 21-28 in 32 issues Price: US \$1709.50/Dfl. 4240.00

*Reduced Combined Subscription to Nuclear Instruments and Methods in Physics Research - Section A and Section B for 1987: US \$3484.00/Dfl. 8640.00*

## Nuclear Physics A

1987: Vols. 461-475 in 60 issues Price: US \$2661.00/Dfl. 6600.00

## Nuclear Physics B

1987: Vols. 278-293 in 64 issues Price: US \$2838.50/Dfl. 7040.00

## Nuclear Physics B (FS)

(Field Theory and Statistical Systems)

1987: Vols. 18-20 in 12 issues Price: US \$571.00/Dfl. 1416.00

*Reduced Combined Subscription to Nuclear Physics A, B and Nuclear Physics B (FS): US \$4512.50/Dfl. 11,191.00*

## Nuclear Physics B (PS)

(Proceedings Supplements) NEW

1987: Vols. 1-3 in 3 issues Price: US \$272.00/Dfl. 675.00

*Reduced Subscription to Nuclear Physics B (PS) if combined with Nuclear Physics Section B or Nuclear Physics Section A + B: US \$224.00/Dfl. 555.00*

## Optics Communications

1987: Vols. 61-64 in 16 issues Price: US \$516.00/Dfl. 1280.00

## Physica A

1987: Vols. 140-145 in 18 issues Price: US \$750.00/Dfl. 1860.00

## Physica B + C

1987: Vols. 143-149 in 21 issues Price: US \$875.00/Dfl. 2170.00

## Physica D: Nonlinear Phenomena

1987: Vols. 24-28 in 15 issues Price: US \$625.00/Dfl. 1550.00

*Reduced Combined Subscription to Physica A, Physica B + C and Physica D: US \$1923.00/Dfl. 4770.00*

## Physics Letters A

1987: Vols. 122-127 in 54 issues Price: US \$658.00/Dfl. 1632.00

## Physics Letters B

1987: Vols. 184-199 in 64 issues Price: US \$1755.00/Dfl. 4352.00

## Physics Reports

1987: Vols. 144-156 in 72 issues Price: US \$1426.00/Dfl. 3536.00

*Reduced Combined Subscription to Physics Letters A and B and Physics Reports: US \$3316.50/Dfl. 8225.00*

## Solar Energy Materials

1987: Vols. 15 and 16 in 12 issues Price: US \$250.00/Dfl. 620.00

## Solid State Ionics

1987: Vols. 22-25 in 16 issues Price: US \$419.50/Dfl. 1040.00

## Surface Science

1987: Vols. 177-192 in 48 issues Price: US \$2387.00/Dfl. 5920.00

## Surface Science Letters

1987: Vol. 7 in 12 issues Price: US \$40.50/Dfl. 100.00

Subscriptions to Surface Science Letters are **only available** to individual research workers.

## Surface Science Reports

1987: Vol. 7 in 4 issues Price: US \$117.00/Dfl. 290.00

*Reduced Combined Subscription to Surface Science (including Surface Science Letters), Applied Surface Science and Surface Science Reports for 1987: US \$2641.00/Dfl. 6550.00*

## Ultramicroscopy

1987: Vols. 20-22 in 12 issues Price: US \$338.50/Dfl. 840.00

*Please note that prices are subject to exchange rate fluctuations. The Dutch guilder price is definitive, unless otherwise stated.*

*All prices include postage and handling charges.*

*Journals are sent by surface delivery to all countries, except the following countries where SAL airdelivery (Surface Airlifted Mail) is ensured: U.S.A., Canada, Japan, Australia, New Zealand, P.R. China, India, Israel, S. Africa, Malaysia, Singapore, South Korea, Taiwan, Pakistan, Hong Kong, Brazil, Argentina, Thailand, Mexico.*

*Airmail rates for other countries are available upon request.*

P6049NHH

# North-Holland Physics Publishing

P.O. Box 103-1000 AC Amsterdam-The Netherlands

ELSEVIER SCIENCE PUBLISHERS, Journal Information Center, 52 Vanderbilt Ave.-New York, N.Y. 10017-U.S.A.





